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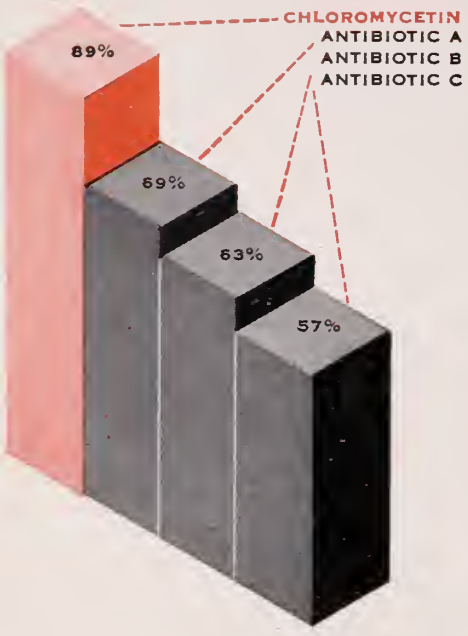
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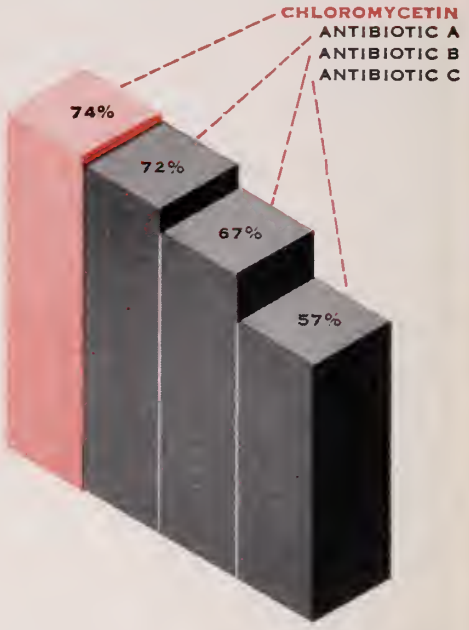
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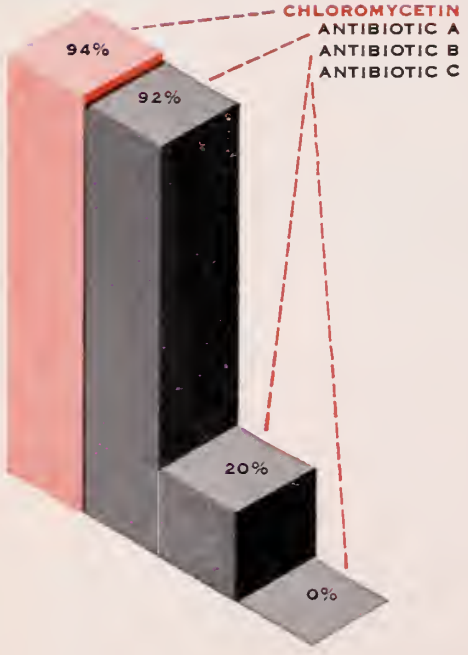


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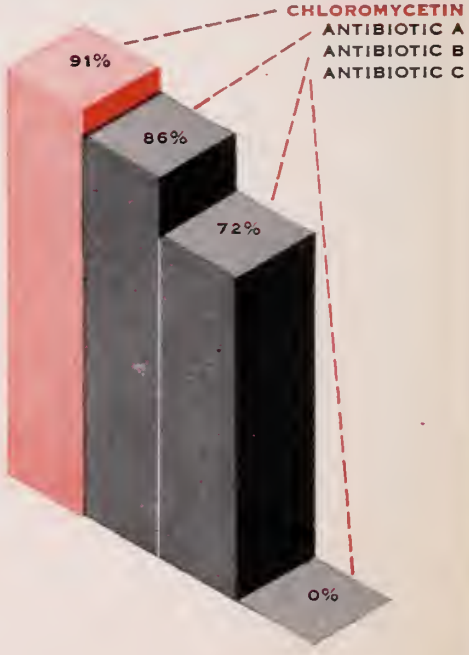
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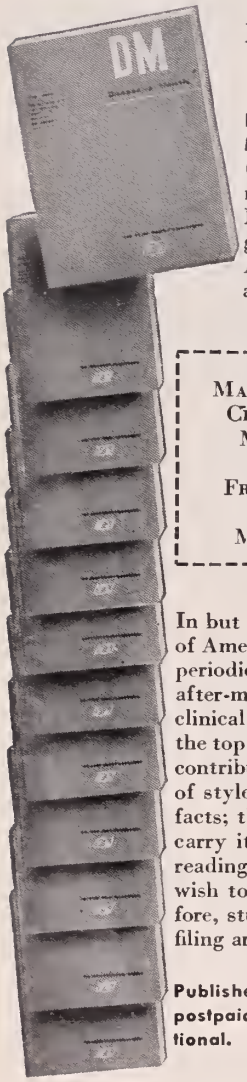
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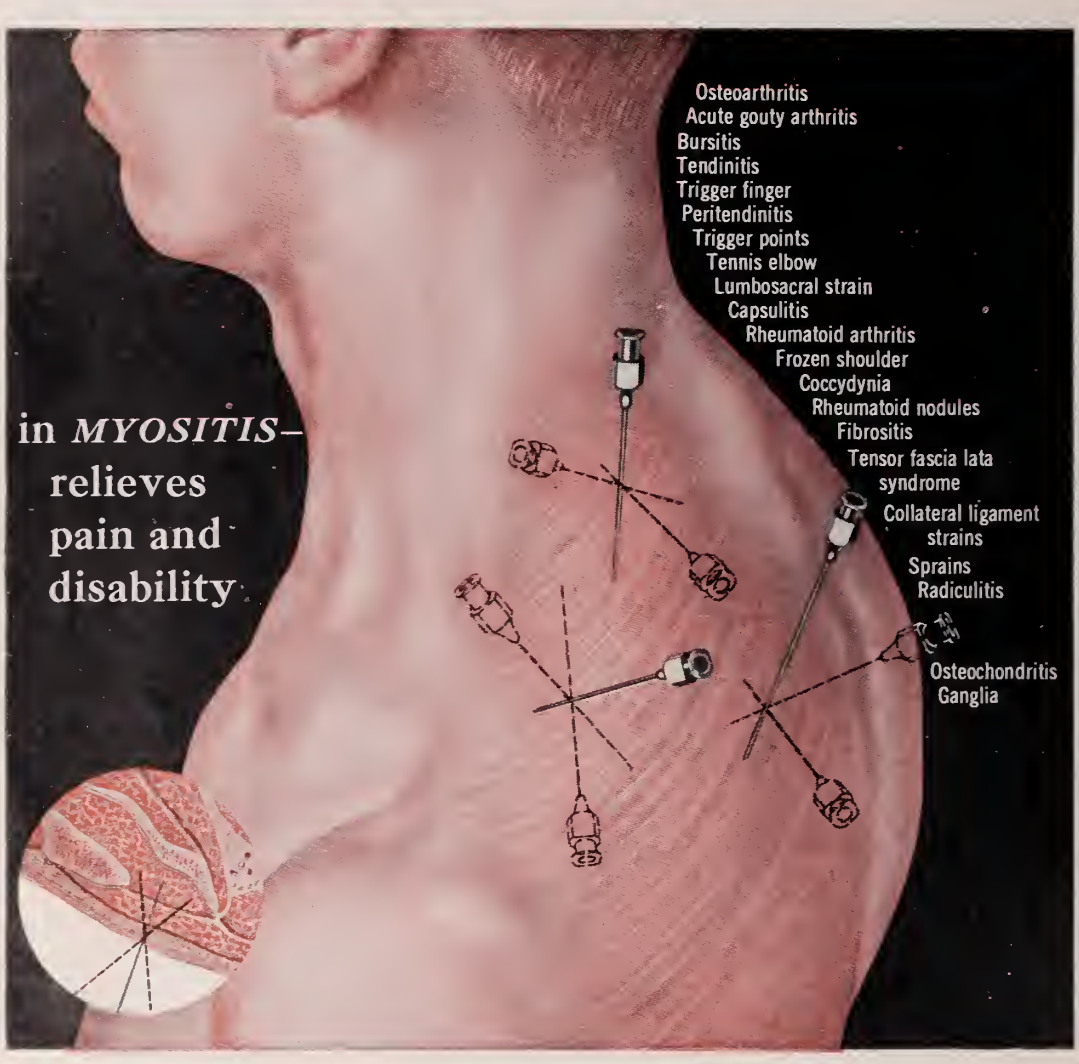
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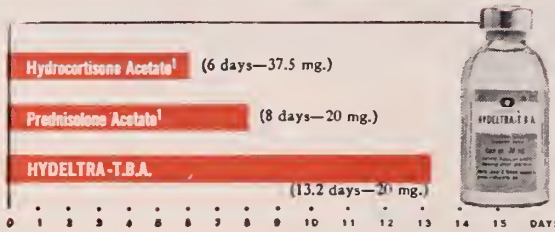
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Dosage: the usual intra-articular, intra-bursal or soft tissue dose ranges from 20 to 30 mg. depending on location and extent of pathology.

Supplied: Suspension 'HYDELTRA'-T.B.A.—20 mg./cc. of prednisolone *tertiary*-butylacetate, in 5-cc. vials.

MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC.
PHILADELPHIA 1, PA.

1. Hollander, J. L., *Paper read at conference in New York City, May 31 and June 1, 1955*

NEW

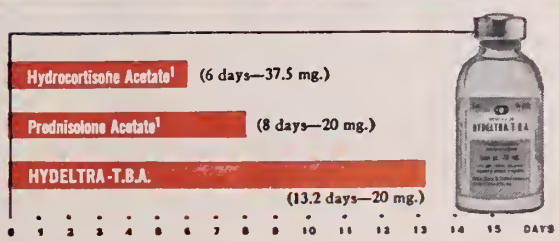
HYDELTRA®-T.B.A.

(Prednisolone tertiary-butylacetate, Merck)

for relief that lasts—longer



Duration of relief exceeds that provided by any other steroid ester



Dosage: the usual intra-articular, intra-bursal or soft tissue dose ranges from 20 to 30 mg. depending on location and extent of pathology.

Supplied: Suspension 'HYDELTRA'-T.B.A.—20 mg./cc. of prednisolone *tertiary*-butylacetate, in 5-cc. vials.

MSD

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PHILADELPHIA 1, PA.

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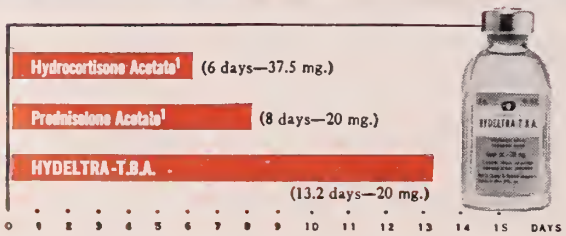
for relief that lasts—longer

in *TENOSYNOVITIS*—
often frees
"locked"
tendons
without
need
for surgery



Osteoarthritis
Rheumatoid arthritis
Acute gouty arthritis
Bursitis
Tendinitis
Trigger finger
Tenosynovitis
Trigger points
Tennis elbow
Lumbosacral strain
Capsulitis
Frozen shoulder
Coccydynia
Rheumatoid nodules
Fibrositis
Tensor fascia lata syndrome
Collateral ligament strains
Sprains
Radiculitis
Osteochondritis
Ganglia

Anti-inflammatory effect lasts longer than that provided by any other steroid ester



Dosage: the usual intra-articular, intra-bursal or soft tissue dose ranges from 20 to 50 mg. depending on location and extent of pathology.

Supplied: Suspension 'HYDELTRA'-T.B.A.—20 mg./cc. of prednisolone *tertiary*-butylacetate, in 5-cc. vials.

MSD

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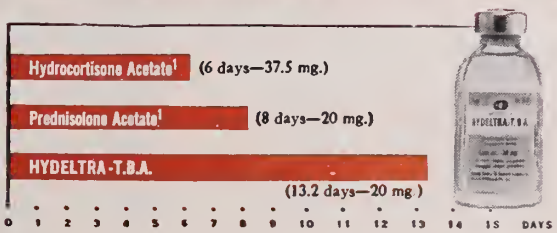
for relief that lasts—longer

in *TRIGGER POINT TENDERNESS*—
permits
painless
movement



Bursitis
Rheumatoid arthritis
Osteoarthritis
Acute gouty arthritis
Tendinitis
Trigger finger
Peritendinitis
Trigger points
Tennis elbow
Lumbosacral strain
Capsulitis
Frozen shoulder
Coccydynia
Rheumatoid nodules
Fibrositis
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MSD
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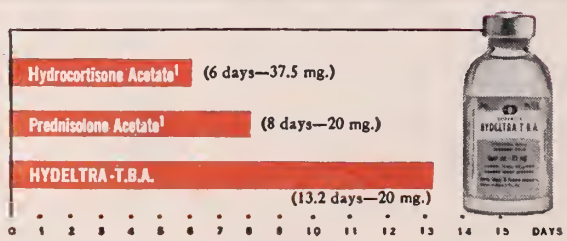
for relief that lasts—longer

in *SPRAINS*—
reduces tenderness,
swelling and
limitation of motion



- Osteoarthritis
- Acute gouty arthritis
- Bursitis
- Tendinitis
- Trigger finger
- Peritendinitis
- Trigger points
- Tennis elbow
- Lumbosacral strain
- Capsulitis
- Rheumatoid arthritis
- Frozen shoulder
- Coccydynia
- Rheumatoid nodules
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DIVISION OF MERCK & CO., INC.
PHILADELPHIA 1, PA.

1. Hollander, J. L., *Paper read at conference in New York City, May 31 and June 1, 1955*

Doctor, would it be helpful to you in your practice to know that there is a food available at reasonable prices in the stores the year round having these attributes:



1. High public acceptance as to flavor and palatability—billions eaten annually.

2. One of the best of the "protective" foods with a well-rounded supply of vitamins and minerals.

3. Low sodium—very little fat—no cholesterol.

4. Sealed by nature in a dust-proof package.

5. One of the first solid foods fed babies.

6. Can be easily digested by old folks as well as infants.

7. Can be readily eaten out of hand, in milk shakes, on cereals, or in salads.

8. Can be baked, broiled or fried.

9. Can be used as an ingredient product in breads, pies, cakes and desserts.

10. Useful in bland and low-residue diets.

11. Mildly laxative.

12. May be used in the management of both diarrhea and constipation.

13. Can be used in reducing diets.

14. Can be used in high-calorie diets.

15. Useful in the dietary management of celiac disease.

16. Useful in the dietary management of idiopathic non-tropical sprue.

17. Useful in the management of diabetic diets.

18. Valuable in many allergy diets.

19. Belongs among foods useful in certain acute intestinal infections.

20. A protein sparer.

21. Favorably influences mineral balance.

22. Useful in the management of ulcer diets.

23. One of the easiest foods to eat or prepare.

FOR THE NAME OF THIS FOOD, PLEASE TURN THE PAGE



The answer is

B A N A N A S

If you would like

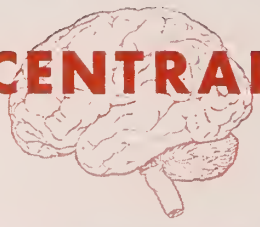
1. The authority for any of the statements made on the preceding page . . .
2. Additional information in connection with any of them...
3. The composition of the banana . . .
4. The nutritional story of the banana . . .
5. Information on various ways to prepare or serve bananas.

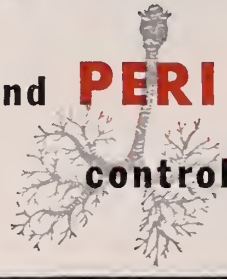
Please feel free to write to

Director, Chemical and Nutrition Research, United Fruit Company

PIER 3, NORTH RIVER, NEW YORK 6, N. Y.

Both CENTRAL and PERIPHERAL control of cough





SYNEPHRICOL® cough syrup

ANTITUSSIVE • DECONGESTANT • ANTIHISTAMINIC

Combines:

Central Antitussive Effect — mild, dependable
Topical Decongestion — prompt, prolonged

plus Antihistaminic and Expectorant Action

Winthrop LABORATORIES
NEW YORK 18, N. Y.

Synephricol, Neo-Synephrine (brand of phenylephrine) and Thenfadil (brand of thenyldiamine), trademarks reg. U.S. Pat. Off.

Each teaspoonful (4 cc.) contains:

Neo-Synephrine® hydrochloride	5.0 mg.
Thenfadil® hydrochloride	4.0 mg.
Dihydrocodeinone bitartrate	1.33 mg.
Potassium guaiacol sulfonate	70.0 mg.
Ammonium chloride	70.0 mg.
Menthol	1.0 mg.
Chloroform	0.02 cc.
Alcohol	8%

Bottles of 16 fl. oz.

EXEMPT NARCOTIC

WHY SENSITIZE

in topical and ophthalmic infections

USE 'POLYSPORIN'®

brand

POLYMYXIN B—BACITRACIN OINTMENT

to insure broad-spectrum therapy with minimum allergenicity

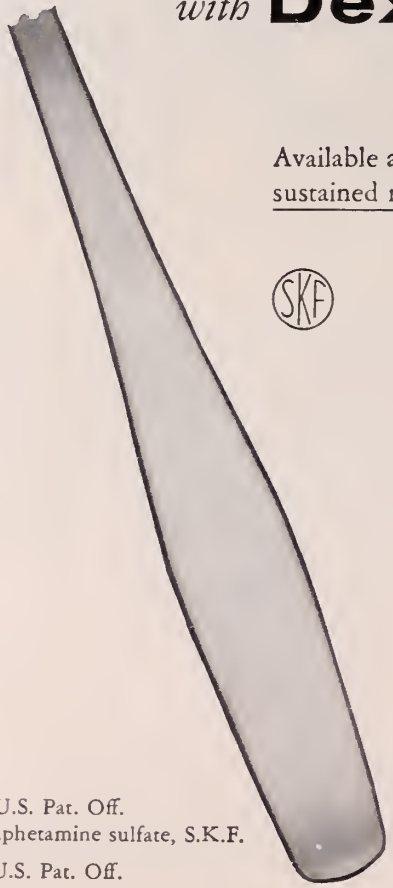
For topical use: in ½ oz. and 1 oz. tubes.
For ophthalmic use: in ⅛ oz. tubes.



BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N. Y.



Overeating is a bad habit—
you can help your patients
to break it
with **Dexedrine***



Available as tablets, elixir, and Spansule† sustained release capsules.

SKF

*T.M. Reg. U.S. Pat. Off.
for dextro-amphetamine sulfate, S.K.F.

†T.M. Reg. U.S. Pat. Off.



One DONNAGESIC Extentab gives 10 to 12 hours of steady, high-level codeine analgesia. Rebuilding of effective analgesia with repeated doses is avoided. Patient comfort is continuous.

There is more pain relief in DONNAGESIC Extentabs than in codeine alone — codeine analgesia is potentiated by the phenobarbital present. In addition, phenobarbital diminishes anxiety, lowering patient's reactivity to pain.

DONNAGESIC is safer, too, for codeine side effects are minimized by the peripheral action of the belladonna alkaloids.

extended action—The intensity of effects smoothly sustained all-day or all-night by each DONNAGESIC Extentab is equivalent to, or greater than, the maximum which would be provided by q. 4h. administration of one-third the active ingredients.

Donnagesic™ Extentabs*

extended action tablets of CODEINE with DONNATAL®

once and for all every 10-12 hours codeine uses

	DONNAGESIC No. 1 (pink)	DONNAGESIC No. 2 (red)
CODEINE Phosphate	48.6 mg. (¾ gr.)	97.2 mg. (1½ gr.)
Hyoscyamine Sulfate	0.3111 mg.	0.3111 mg.
Atropine Sulfate	0.0582 mg.	0.0582 mg.
Hyoscine Hydrobromide	0.0195 mg.	0.0195 mg.
Phenobarbital	48.6 mg. (¾ gr.)	48.6 mg. (¾ gr.)

Robins **A. H. ROBINS CO., INC., RICHMOND, VIRGINIA** *Ethical Pharmaceuticals of Merit Since 1878*

*Reg. U. S. Pat. Off., Pat. applied for.

for added certainty

in antibiotic therapy...

multi-spectrum†
synergistically
strengthened

Sigma



†the antimicrobial spectrum of tetracycline extended and potentiated to include even those strains of staphylococci and other pathogens resistant to previously employed antibiotic therapy; and to provide

1. a new maximum in therapeutic efficacy

2. a new maximum in protection against resistance

3. a new maximum in safety and toleration

Capsules: 250 mg. (oleandomycin 83 mg., tetracycline 167 mg.)

Pfizer *World leader in antibiotic development and production*

*Trademark

plus a new maximum in palatability... *now available with new mint-flavored*

mycin*

OLEANDOMYCIN TETRACYCLINE

for ORAL SUSPENSION



A savory mint flavor that adds the further certainty of acceptability to antibiotic therapy, particularly for that 90% of the patient population treated in the home or office where sensitivity testing may not be feasible, and where pleasant flavor can make the difference between prescription adherence and laxity.

Sigmamycin for Oral Suspension

is available in 2 oz. bottles containing 1.5 Gm. of Sigmamycin (oleandomycin 500 mg., tetracycline 1 Gm.). When reconstituted each 5 cc. teaspoonful contains 125 mg. of Sigmamycin (42 mg. of oleandomycin as the phosphate salt with tetracycline amphoteric equivalent to 83 mg. of tetracycline hydrochloride).

PFIZER LABORATORIES, Brooklyn 6, N.Y.
Division, Chas. Pfizer & Co., Inc.

when you want broad spectrum antibiotic therapy with added safety for the many common respiratory, gastro-intestinal and urinary tract infections . . . the product to prescribe is

MYSTECLIN

Squibb Tetracycline-Nystatin

the ONLY broad spectrum antibiotic preparation with added protection against monilial superinfection

when you want specific antibiotic therapy for infections caused by Candida albicans (monilia) . . . the product to prescribe is

MYCOSTATIN

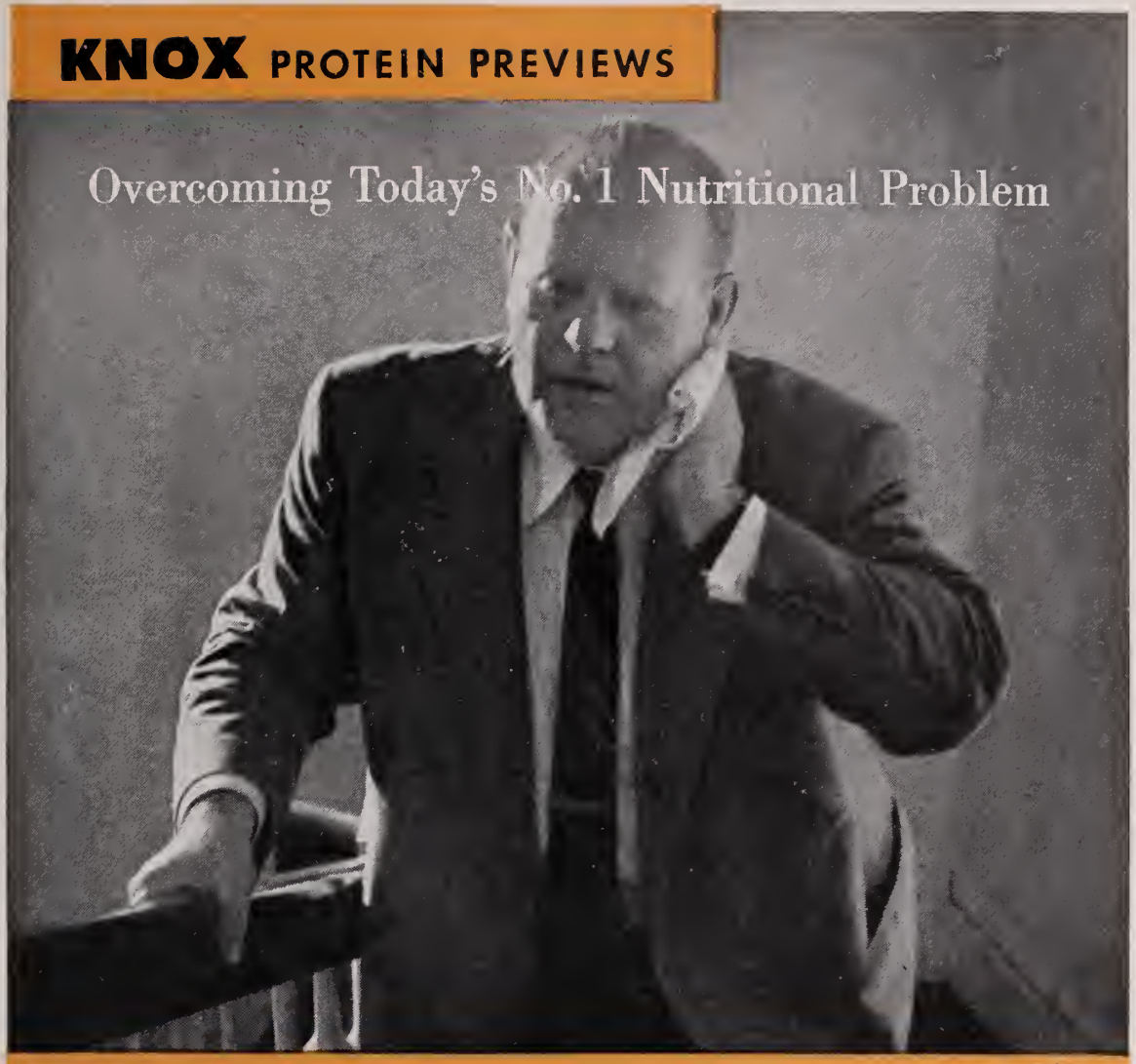
Squibb Nystatin

the ONLY effective and safe antifungal antibiotic available

"MYCOSTATIN"® AND "MYSTECLIN"® ARE SQUIBB TRADEMARKS

SQUIBB *Squibb Quality—the Priceless Ingredient*

KNOX PROTEIN PREVIEWS



Knox "Choice of Foods" Diet Can Help Your CARDIAC Patients Lose Weight Successfully



1. Color-coded diets of 1200, 1600 and 1800 calories are based on nutritionally-sound Food Exchanges.[1]

2. Easy-to-use Food Exchanges (referred to in the Knox booklet as Choices) eliminate calorie counting by patient.

3. Diets promote accurate adjustment of caloric levels to the special needs of the patient yet allow each individual considerable latitude in the choice of foods.

4. More than six dozen appetizing, low-calorie recipes are presented on the last 14 pages of each diet booklet.

1. The Food Exchange Lists referred to are based on material in "Meal Planning with Exchange Lists" prepared by Committees of the American Diabetes Association, Inc., and The American Dietetic Association in cooperation with the Chronic Disease Program, Public Health Service, Department of Health, Education and Welfare.

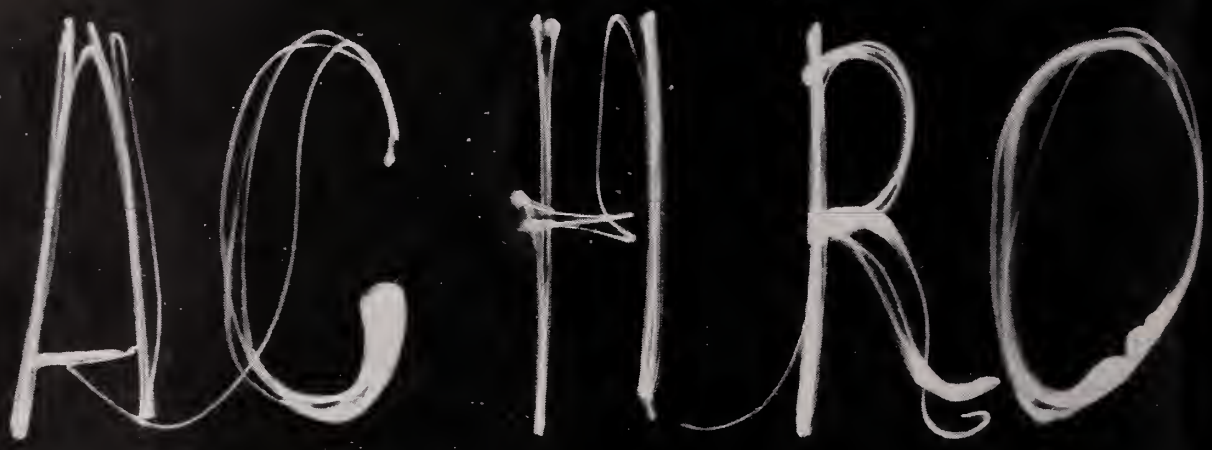


Chas. B. Knox Gelatine Co., Inc.
Professional Service Dept. SJ-21
Johnstown, N. Y.

Please send me ..... dozen copies of the new illustrated Knox Reducing booklet based on Food Exchanges.

Your Name and Address

a highlight in therapeutics



.Hydrochloride
Tetracycline HCl Lederle

*Reg. U. S. Pat. Off.



acknowledged as competent

Spontaneously acknowledged by physicians everywhere as an outstanding therapeutic advance, repeatedly confirmed during more than three years of clinical usage, ACHROMYCIN® Tetracycline ranks among the foremost in its field today... judged on its exceptional effectiveness against a wide range of pathogens, prompt control of infections most commonly encountered in medical practice, low incidence of side reactions, minimal emergence of resistance.

ACHROMYCIN is available in 21 dosage forms—each with full tetracycline effect—to meet the exacting requirements of modern medicine.

Lederle

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

Meat...

and the Need for Reasonable Amounts of Fat to Maintain Good Health

The place of dietary fat in human nutrition is being widely discussed. Scientists who know tell us that some fat is desirable in our everyday diet whether body weight has to be reduced or not.

Why are fats important to good health? Because they contribute to the processes of growth and replacement of tissue. Because they are an important source of calories. Because they make foods more inviting and better tasting.

Despite great advances in nutritional knowledge the exact role of fat in the diet is not yet fully defined. Yet it is known that some fat is necessary in healthful day-to-day nutrition.

For good health, good nutrition, and tastier meals, be sure there is some fat—in reasonable amounts—in your daily diet. Meat—the most versatile of high protein and B vitamin foods—because of its many varieties and cuts is an excellent vehicle to provide this essential fat in any amount desired. Animal fat products, such as lard, are not only economical, but add delightfully to the taste appeal of hundreds of recipes.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

American Meat Institute

Main Office, Chicago... Members Throughout the United States

relaxes both mind and muscle

for the average patient in everyday practice

- well suited for prolonged therapy
- well tolerated, nonaddictive, essentially nontoxic
- no blood dyscrasias, liver toxicity, Parkinson-like syndrome or nasal stuffiness
- chemically unrelated to chlorpromazine or reserpine
- does not produce significant depression
- orally effective within 30 minutes for a period of 6 hours

Indications: **anxiety and tension states, muscle spasm.**

THE ORIGINAL MEPROBAMATE

Miltown®

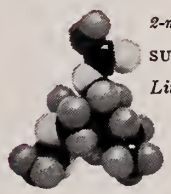
Tranquilizer with muscle-relaxant action

DISCOVERED AND INTRODUCED BY WALLACE LABORATORIES, *New Brunswick, N.J.*

2-methyl-2-n-propyl-1,3-propanediol dicarbamate—U.S. Patent 2,724,720

SUPPLIED: *400 mg. scored tablets. Usual dose: 1 or 2 tablets t.i.d.*

Literature and Samples Available on Request



THE MILTOWN MOLECULE

CM-3706-R2



little

How to win friends ...

The Best Tasting Aspirin you can prescribe.

The Flavor Remains Stable down to the last tablet.

25¢ Bottle of 48 tablets (1¼ grs. each).



We will be pleased to send samples on request.

THE BAYER COMPANY DIVISION
of Sterling Drug Inc.

1450 Broadway, New York 18, N. Y.

recognized

as a potent, specific anti-arthritic

established

by over 100 million patient days

substantiated

in more than 700 published reports

BUTAZOLIDIN®

(phenylbutazone GEIGY)

potent, specific anti-arthritic

Based on an impressive background of achievement attained over a period of four years involving both long-term and short-term therapy in all the major forms of arthritis, BUTAZOLIDIN is recognized as one of the most effective anti-arthritic agents currently available.

relieves pain

improves function

resolves inflammation

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for literature before prescribing it.

GEIGY

GEIGY PHARMACEUTICALS, Division of Geigy Chemical Corporation, New York 13, N.Y.

72556

Erythromycin in Treating Pneumonia

A 27-year-old man, a chronic alcoholic, was admitted with a history of an alcoholic spree followed by a cough, greenish sputum and chills and fever.

Physical examination showed a temperature of 104 F. and indicated pneumonia in the right lower lobe. This was confirmed by X-ray. The sputum revealed gram-positive diplococci and blood culture subsequently grew Type VII pneumococci.

The patient was treated with erythromycin, 300 mg. every six hours per os. His temperature dropped to normal by 48 hours and X-ray of the chest revealed considerable clearing by the fourth hospital day. After 10 days hospitalization, the patient was fit for discharge.[1]

First Antibiotics Symposium, we reported the successful treatment with
hromycin of *H. influenzae* pneumonia and bacteremia. A second patient
with *H. influenzae* pneumonia and bacteremia had a clinical course almost
identical to the one previously reported, with cure obtained by treatment with
500 mg. of erythromycin per os every four hours for 14 days.

Of these 132 patients with bacterial pneumonia, 127 (96%) had a good clinical
result. One patient with lobar pneu

"Highly Effective in Pneumonia"

In one investigation, 75 adult patients with bacterial pneumonia were treated with erythromycin. In his summary, the clinician reported: "It is concluded that erythromycin is highly effective in the treatment of pneumonia due to gram-positive bacteria."[2]

This, of course, is only one of many reports showing the effectiveness of ERYTHROCIN against coccic infections. You'll get the same good results (nearly 100% in common, bacterial respiratory infections) when you prescribe ERYTHROCIN. Abbott

filmtab®

Erythrocin®

(Erythromycin, Abbott)

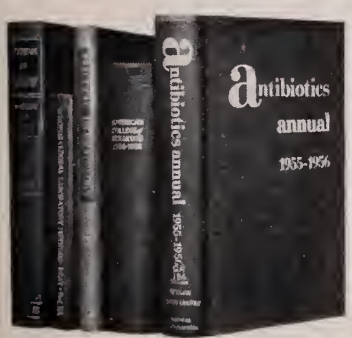
STEARATE

"No Serious Side Effects Occurred"

After a study of 171 patients treated with erythromycin, the investigator wrote: "No serious side effects occurred with prolonged therapy or with doses up to 8 Gm. per day in the severe infections."[1]

Actually, ERYTHROCIN stands on a remarkable record of safety. After four years, there's not a single report of a severe or fatal reaction attributable to erythromycin. In addition, you'll find allergic manifestations rarely occur. *Filmtab* ERYTHROCIN Stearate (100 and 250 mg.), in bottles of 25 and 100. Abbott

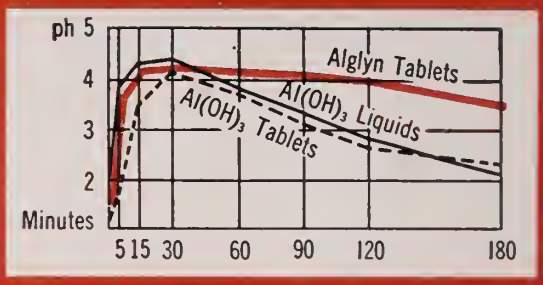
® Filmtab—Film-Sealed tablets, Abbott; pat. applied for.



1. Romansky, M.J., et al., Antibiotics Annual 1955-1956, p. 48.
2. Waddington, W. S., Maple, F. C., and Kirby, W. M. M., A.M.A. Archives of Internal Medicine, 1954, p. 556.

701051

Announcing Revision of N.N.R. Monograph for



2

ALGLYN®

dihydroxy aluminum aminoacetate

On the basis of considerable *in vitro* evidence accumulated over a period of seven years, the Council on Pharmacy and Chemistry has revised the original ALGLYN monograph acknowledging that this most recent form of aluminum antacid therapy is as active—IN TABLET FORM—as the various aluminum hydroxide preparations are in LIQUID form:

> "Dihydroxy aluminum aminoacetate . . . shares the properties of the aluminum hydroxide gel preparations. *In vitro* studies indicate that the buffering action of dihydroxy aluminum aminoacetate in tablet form is comparable to that of the liquid preparations of aluminum hydroxide gel when compared on the basis of equivalent aluminum content."

Alglyn Tablets, 0.5 Gm. dihydroxy aluminum aminoacetate, are supplied in bottles of 100 (white). Your patients will welcome the change from liquid antacid preparations to easy-to-take convenient, lightly-flavored Alglyn Tablets[1].

Also supplied in combination with spasmolytic and sedative therapy as **Malglyn Compound,** each tablet contains dihydroxy aluminum aminoacetate, 0.5 Gm., belladonna alkaloids, 0.162 mg., phenobarbital, 16.2 mg., per tablet, bottles of 100 (pink); and as **Belglyn,** dihydroxy aluminum aminoacetate, 0.5 Gm., belladonna alkaloids, 0.162 mg., per tablet, bottles of 100 (yellow).

Reprint of recent in vivo studies available on request

1. Rossett, N.E. and Rice, M.L., Jr.: Gastroenterology, 26:490, 1954.
2. Hammarlund, E.R. and Rising, L.W.: J. Am. Pharm. Assoc., Scientific Edition, 38:586, 1949.

Brayton PHARMACEUTICAL COMPANY

CHATTANOOGA 9, TENNESSEE



Tastiest way to dissolve sore throat symptoms

TROCHES

'HYDROZETS'

(HYDROCORTISONE-BACITRACIN-TYROTHRICIN-NEOMYCIN-BENZOCAINE TROCHES)

Adult or juvenile, your patients with sore throats will welcome a course of HYDROZETS. These newest Merck Sharp & Dohme troches offer anti-inflammatory, anti-infective and analgesic properties that promptly alleviate distressing mouth or throat irritation whether caused by infection, mechanical injury or allergic reaction. And HYDROZETS taste so good, it's hard to believe they're medicine.

Formula: Each HYDROZETS Troche contains—2.5 mg. 'HYDROCORTONE' to reduce pain, heat and swelling; 50 units Zinc Bacitracin, 1 mg. Tyrothricin and 5 mg. Neomycin Sulfate to combat gram-positive and gram-negative bacteria; and 5 mg. Benzocaine for rapid soothing analgesia.

Other indications: As adjunct therapy in aphthous ulcers, acute and chronic gingivitis and Vincent's infection.

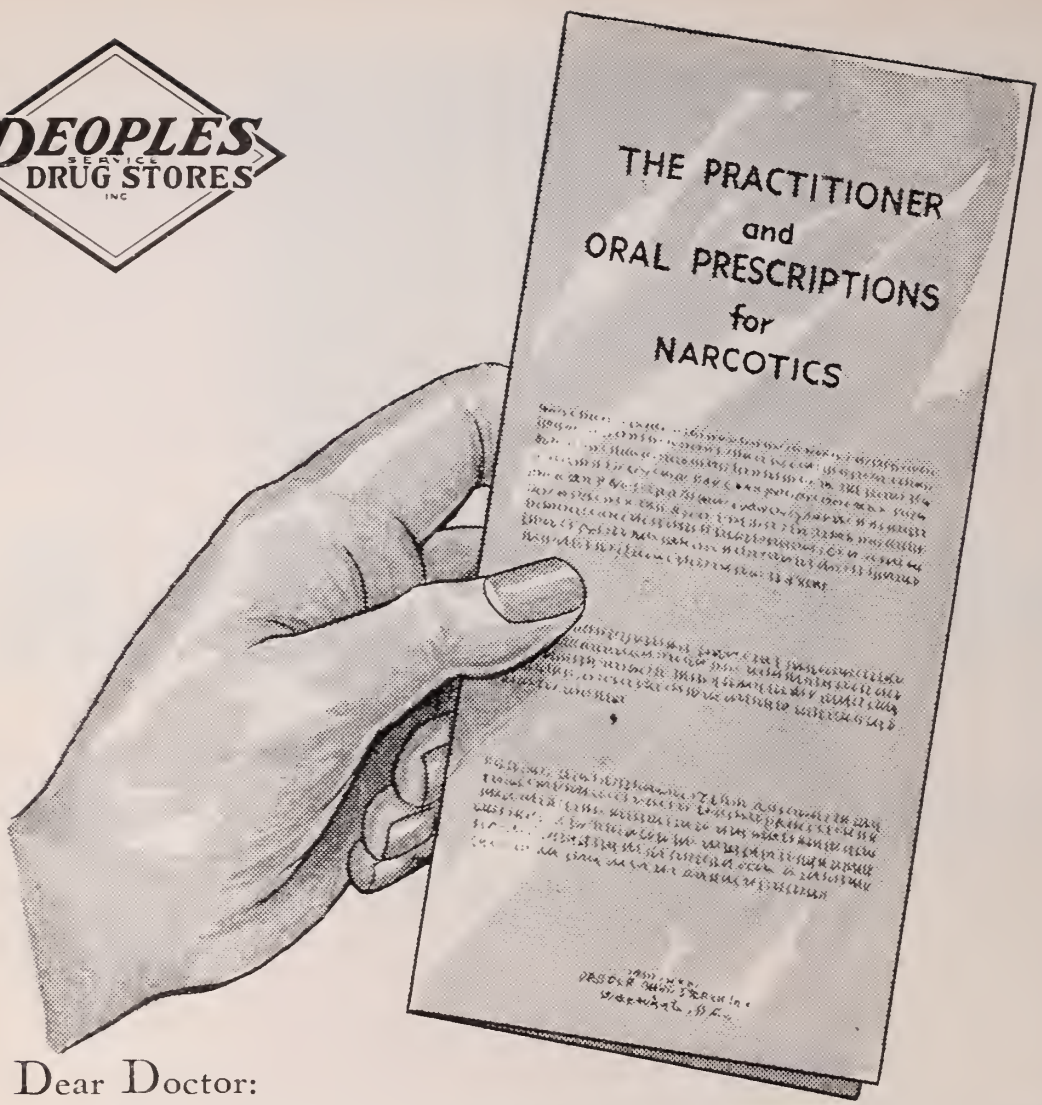
Supplied: Vials of 12 troches.

MSD

MERCK SHARP & DOHME

DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

PEOPLES SERVICE DRUG STORES INC



Dear Doctor:

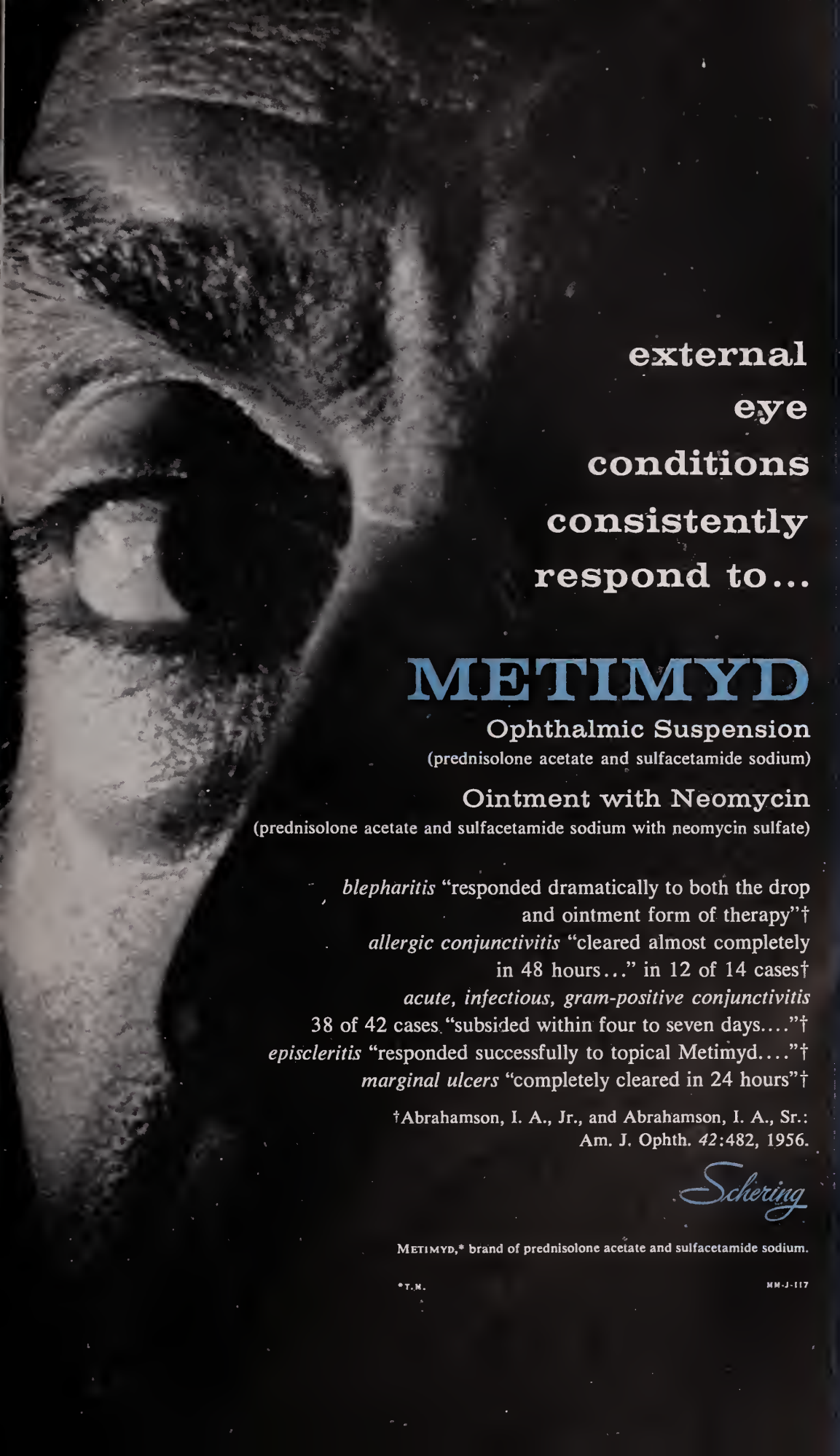
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Guest Editorial . . . .

The Changing Medical World

MAN'S INSATIABLE desire during the past half century to improve himself, to conserve health by preventing or curing disease, has resulted in the most fantastic revolutionary changes in the practice of medicine. The change of pace during this brief span of fifty years has far exceeded that of many previous centuries. The tempo has been so rapid that those who have lived in it have had their pia mater stretched to such an extent they have had difficulty adjusting themselves to the current practice of medicine. Space will not permit a complete evaluation of the vast changes which have occurred during this brief period. However, we might pause to take stock and evaluate that which has taken place in the last half century in orthopedic surgery alone.

When one has spent a period of thirty-five years in the practice of this branch of surgery and has been enabled to view this transition, he is almost staggered. When I first began the practice of orthopedic surgery, there were no skilled anaesthetists, no antibiotics, and few of the specialized tools such as adaptable operating tables, electric powered saws and drills, no triflanged nails, short or long. The x-ray had not moved from the basement to the operating rooms, nor were there blood or bone banks. The metals used were soft and of poor quality. The factor of electrolysis usually resulted in defeating the purpose for which the appliance was used. Even silver, which used to have a certain commercial value, disintegrated in the tissues.

Finally our metallurgical friends were able to develop an alloy, a type of stainless steel, SMO 18, which opened the tremendous field of internal splinting of bones without fear of the catastrophic effects of electrolysis. The revolutionary discovery of the sulfa drugs and later additions of the antibiotics, such as pencillin, allowed the perfection of the techniques employing these newer metals.

We, in the earlier days were confronted with the disastrous effects of infections in bones and joints; the extent of the crippling from osteomyelitis alone has never been estimated. As for the patients with septic arthritis, the mortality was exceedingly high The antibiotic age has changed all this.

Tuberculosis of the bones and joints particularly during the first decade of life resulted in the permanent crippling of many. As one example of the rapid decrease in the incidence of a disease, when it fell to my lot to be chief of a convalescent hospital for crippled children during the 1930's there were usually about 30 beds of a one hundred bed hospital occupied by children with bone and joint tuberculosis. During the next twenty years the need for beds for children with this disease virtually dropped to zero.

In these earlier years, the congenital anomalies such as club feet, dislocated hip, arrested growth of extremities due to sepsis, and contractures from burns were problems of considerable magnitude.

One of the discouraging types of patients the orthopedic surgeon was called upon to treat in those days was the individual of whatever age with an intracapsular fracture of the hip. The mortality rate was high in these people, especially those with intertrochanteric fractures who were made bedfast for a period of weeks to months. The introduction by Smith-Petersen of the cannulated triflanged nail for internal splinting of cervical fractures of the femora, together with the introduction of the additional plate for splinting the intertrochanteric variety, represents one of the greatest contributions made in the past few decades. During World War II the German surgeons applied the principle of the triflanged nail to the treatment of fractures of the shaft of the long bones. These patients who had been forced to remain in bed for long periods are now able to leave the hospital after days instead of months.

Most of our colleagues who have entered medicine during the past two decades have seen none of the usual rachitic deformities which were so common in this earlier period. It was frequently necessary to do osteotomies and osteoclases for correction of severe bow legs or knock knees. Today, however, this is all a matter of history, so that about all we now view are the mild knock knees of the female, which anthropologists tell us is a normal structure dependent upon anatomy of their pelvis.

One of the more frequent and crippling conditions which were a challenge to correct were the deformities resulting from poliomyelitis. Even though the Salk vaccine gives promise, this disease still produces a high percentage of crippling in children. However, increased knowledge and improved techniques have resulted in prevention of many deformities and a more exact correction of those which occur.

In short, we have learned to control or prevent shock, to correct congenital anomalies early and avoid the crippling effects of delayed treatment, to prevent damage to the growing bones or joints by the prophylactic use of antibiotics, to practically eradicate tuberculosis by hygiene and milk control. The remaining two challenges are the prevention of paralytic poliomyelitis, which should be solved during the next decade, and the ever present and devastating damage which occurs daily from accidents, especially those resulting from the automobile.

It would be naive to hope that man's ills during the next three decades might be alleviated to the same degree—but who knows? We still need many answers. Malignant disease is still on the increase. The chemical or viral solution may come at any time. While the previously mentioned diseases would appear to be nearer a solution, the present major problem of morbidity and mortality resulting from the massacre by the motor car on our highways looms ever larger.

In conclusion it may be said that the practice of orthopedic surgery has so changed that one who concluded his practice three decades ago would hardly recognize it. Today the beds of an orthopedic service in our university hospitals are almost completely filled by patients suffering from trauma with only a scattering of those with the crippling deformities of former years.

Maxwell Harbin, M.D.

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The Medicinal Benefits of Beverage Alcohol

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New York, New York

IN 1916, my father, who was professor of medicine at the University of Virginia, wrote a paper entitled, "Alcohol, Its Uses and Abuses."[1] His conclusion was that the moderate intake of beverage alcohol is nonharmful to most people, and, indeed, is beneficial in the treatment of many conditions. This conclusion fell in line with Sir William Osler's classic observation that beverage alcohol was our most valuable medicinal agent. In reviewing the literature of the last forty years, I find myself in agreement with my father's conclusion.

It is interesting to note that his work was prepared three years before prohibition went into effect. The Volstead Act provided that physicians could prescribe whiskey for their patients when it was indicated, just as physicians today are permitted by law to prescribe digitalis or penicillin when indicated. Since the repeal of the Volstead Act, the attention of many doctors—along with the public—has been so focused on problems of alcoholism that there has been a tendency to overlook the therapeutic value of beverage alcohol.

The writer regards this as unfortunate from a medical standpoint and, socially, difficult to understand; for a recent national survey of physicians indicated that four out of five doctors regularly drink whiskey and other beverage alcohol themselves.[2] This finding leads to the conclusion that the overwhelming majority of physicians, mindful of their own health, regard moderate drinking certainly as not harmful and often beneficial to their well being.

Immoderate drinking is, of course, a problem. Physicians recognize that those who suffer from alcoholism are sick people; in fact, they were sick before they took their first drink. Many who suffer from alcoholism are seeking to escape from reality. Indeed, even depriving them of beverage alcohol without treating their condition would not constitute a solution to their problem, for they would transfer to something far worse.

It is important, therefore, for the practicing physician to examine the therapeutic value of beverage alcohol with scientific objectivity and professional detachment. There are many points of view on the medicinal qualities of beverage alcohol. My studies and observations lead me to believe that, despite the existence of alcoholism as a problem, beverage alcohol can be and is a blessing—not a problem, to the vast majority of our patients. Clearly, this is an area in which further research is indicated.

Let us first dispose of some misconceptions. One concerns the kidneys. Many patients with heart disease have associated kidney disease, and it is often assumed that they must avoid intake of beverage alcohol. In point of fact, there is no evidence that beverage alcohol has any deleterious effect on the kidney function.[3] To the contrary, it is an excellent diuretic.[4]

Too, there is no evidence to support the belief that beverage alcohol *per se* has an etiological effect on hepatic cirrhosis.[5] This disease, commonly referred to as Laennec's cirrhosis, is a deficiency disease seen in the livers of both alcoholics and total abstainers.[6] The cirrhosis is the result, not of beverage alcohol, but of poor nutritional intake. In this respect, Joliffe points out that the person who drinks 20 bottles of sweet, carbonated beverages a day is as likely to develop Laennec's cirrhosis as the person who drinks a pint of whiskey every day.[7]

There is a substantial body of evidence that alcohol in moderation contributes to the general well being. This alone would make it a valuable adjunct in the treatment of a number of diseases, including tuberculosis.[8] Beyond this, beverage alcohol is of considerable value in the relief of many specific conditions. Its use as an antiseptic dates back to ancient times. Long before the birth of anesthesiology, whiskey was recognized by medical science for its analgesic qualities. (Not surprisingly, recent research has indicated that there are new uses for alcohol in this area.)[9] Whiskey also stimulates the appetite and aids the digestion. It has a carminative effect. It is even said to increase selectivity in fertility[10]; and there is evidence that moderate drinkers may have a longer life span than total abstainers.[11]

It is my purpose here to review scientific evidence relating to the benefits to be derived from the mod-

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erate use of beverage alcohol in the treatment of specific conditions.

BEVERAGE ALCOHOL IN THE TREATMENT OF HEART DISEASE

Research has shown that beverage alcohol is a vasodilator and thus increases peripheral vascular flow. It has a longer onset time than nitrates, but its effect is of longer duration. "The most effective drug after nitrates is alcohol," says White.[12] He points out that beverage alcohol was used as a vasodilator long before nitrates were introduced and is still highly useful. "An ounce or two of whiskey, brandy or rum," he says, "may give rapid relief from angina pectoris, usually in the course of a very few minutes." White believes that beverage alcohol is particularly valuable in the prevention of such attacks.

Stockton[13] and Bishop[14] considered that beverage alcohol, as a vasodilator of the coronary arteries, was valuable in the relief of angina pectoris. Among others who have recommended beverage alcohol for angina pectoris are Master, Dack, and Jaffe.[15] Cook and Brown[16] found beverage alcohol of benefit as a pain reliever and vascular dilator not only in angina pectoris but also in thromboangiitis obliterans, Raynaud's disease, and arteriosclerosis with thrombosis. Brooks,[17] with respect to hypertension, held that it "seems beyond dispute" that beverage alcohol relieves the pressures brought on emotionally. "That it (beverage alcohol) prolongs life and increases comfort is but a corollary of this fact," he said. Lieb[18] found that beverage alcohol does not usually affect blood pressure; but to the extent that it does, he said, the pressure is decreased. According to McDowall,[19] the moderate ingestion of beverage alcohol does tend to lower the venous pressure.

Marvin and his associates[20] hold that beverage alcohol in moderation "is beneficial" in heart cases. "Besides being a dilator of the arteries," they point out, in a book sponsored by the American Heart Association, " a highball or two a day can serve as a valuable medicine. Moreover, in many patients, it does much to relax nervous tensions, lessen fatigue, and make life pleasanter." Similarly, Grollman[21] states that "By removing certain nervous inhibitions and excitability," beverage alcohol "may act as a sedative to the circulation."

Just before World War II, Leary,[22] addressing a meeting of Kansas City physicians, made the statement: "When I have the body of a patient sixty-five years of age on the morgue table and I find his aorta as smooth as a baby's skin, it is not necessary for me to get a history. I know already that he has been a long-standing user of alcohol."

About the turn of the century, it was commonly believed that a major black mark against even the moderate use of beverage alcohol was that it somehow caused or hastened arteriosclerosis. However, Cabot[23] in a study of almost 300 cases of alcoholism, found that only 6 per cent showed any signs of arteriosclerosis whatever, regardless of age. Later work by Leary,[24] and by Virchow and Aschoff,[25] among others, indicated that not only does beverage alcohol not cause arteriosclerosis, but it may tend to slow this process by dissolving the cholesterol which is closely associated with the disease. Despite these findings, the effect of alcohol on cholesterol remains in dispute and should be studied further.

Blumenthal[26] has now advanced the theory that stress, rather than cholesterol, causes arteriosclerosis. Should further research support the stress theory, it would appear that the value of beverage alcohol as an adjunct in the management of the disease would still be considerable because of its relaxing, euphoric effects. In connection with the relief of stress, tests conducted at the Laboratory of Applied Physiology, Yale University, have demonstrated that small amounts of alcohol prevent audiogenic seizures in animals. As a result, the researchers wonder "whether the widespread use of alcohol in moderate amounts by man may not be based on the satisfaction of a similar and sought for emotional relaxation."[27]

In the light of these observations, it is understandable that cardiologists customarily recommend the moderate intake of beverage alcohol by their patients so that the exhausted or endangered heart may be stimulated by the nutrient action of the alcohol. In general, moderate use of whiskey or other beverage alcohol improves the amplitude and force of the heart, the mass movement of the blood, the output of the heart, and the efficiency of the circulation.

BEVERAGE ALCOHOL IN THE TREATMENT OF THE AGED

In the book, "Liquor the Servant of Man," Helwig[28] tells the story of a relative who occasionally dined with him. Before and after a full dinner, this relative would have a drink which he enjoyed. His conversation sparkled, and he was full of life. When he later went home to bed, he would have a pleasant, relaxed night of sleep. When he did not dine out, he was neither sparkling nor vivacious; and he customarily slept badly. His difficulty lay in the fact that his daughter, with whom he lived, would not permit him to drink, because she feared

that he might become addicted to alcohol. He was then eighty-three years old.

Geriatricians evidently are less fearful than the young woman just cited, for, among them, beverage alcohol has many friends. Osler called beverage alcohol the milk of old age. The classical data of Pearl[29] showed that moderate drinkers may have a higher expectancy of life than total abstainers. He and others have found that beverage alcohol in moderation can quiet an apprehensive, over-wrought patient and lead to a restful night. It can quicken a sluggish appetite and can even supply a few extra calories when total nutrition is a problem. Einhorn[30], for example, said of anorexia in the aged that by giving them "small doses of an alcoholic beverage they are able to take their meals. Otherwise they would die."

As for addiction, it seems clear that this fear is without rational basis unless the patient of advanced years has been drinking in excessive quantities for a protracted period. It is hard to conceive of a patient who, beginning to use beverage alcohol late in life, is likely to drink in excess.[31] Thewlis[32] recommends "systemic use of wine or spirits" by the aged, even if they previously have been abstentious. Barach[33] reminds those physicians who "advocate wholesale prohibition" of beverage alcohol and other pleasures in the treatment of the aged of this Chinese proverb: "Boredom tires a woman but ruins a man." Beverage alcohol in moderation, "especially after the age of fifty-five, is more conducive to longevity than is total abstinence," reports Billings.[34] And Salter[35], in a review of drugs useful in geriatrics cases, has noted that "For protracted use, alcohol in moderation can serve as the old people's sedative."

Indeed, for individuals over sixty years of age, a daily drink or two of whiskey appears almost mandatory. Whiskey in moderation for those over forty—and oft times for those over thirty—is certainly indicated, for the regressive processes are usually under way by that time. With older age groups in particular, the metabolism, the vital signs, and the enzymes are greatly diminished. Whiskey is valuable in that it conserves these activities. It is rapidly catabolized and thus spares the human organism. As beverage alcohol also helps to destroy certain noxious substances, it thus may help to sustain life.

Haggard and Jellinek[36] find that when older people use alcohol "in suitable moderation and low concentrations," it increases their desire for food. Moreover, "there is mild euphoria, a cheerfulness, and decrease of anxiety; the feeling of chilliness is lessened by the flow of blood to the skin, and the mild sedative action of the alcohol relieves some of the aches and pains."

In the same vein, Stieglitz[37] notes that "Alcohol is a vasodilating substance. It is of considerable assistance in the management and control of arteriosclerotic change in elderly persons. In my opinion, the judicious use of whiskey or other spirituous liquors is therefore indicated in the management of many aged patients. Alcohol in moderation supplies quick fuel and relaxes tensions. It is often most constructive in increasing vigor and endurance in the elderly."

In my own practice, I customarily prescribe a light blended whiskey in geriatric cases. Due to its blending with grain neutral spirits, it is extremely low in toxic congeneric content.[38]

BEVERAGE ALCOHOL IN THE TREATMENT OF DIABETES

Insulin therapy is clearly essential to the diabetic; but it is clinically significant that arteriosclerosis, which insulin is powerless to combat, tends to attack diabetics early and hard. Beverage alcohol is therefore of ancillary use in the treatment of diabetes for, as has already been shown, it is useful in the management of arteriosclerosis and is also valuable in the treatment of diabetes.[39] Before the development of insulin therapy, beverage alcohol was used widely in the treatment of diabetes; and even since insulin, work done by Kolta[40] and others, has borne out the value of beverage alcohol in reducing the blood sugar level. Fishbein[41] has gone so far as to declare that "with alcohol in the diet, it is possible to use a smaller amount of insulin than would otherwise be the case."

Some physicians, nonetheless, may hesitate to prescribe certain forms of beverage alcohol for fear of significant sugar content. In a whiskey carefully blended with grain neutral spirits, the sugar content is negligible.

BEVERAGE ALCOHOL IN GASTROENTEROLOGY

Beverage alcohol in moderation is considered—by Sollmann[42]; Dreiling, Richman, and Fradkin[43]; and Brooks and Thomas[44], among others—to be beneficial to the digestive process in that it stimulates the flow of gastric, pancreatic, and intestinal juices. Experiments conducted by Scott, Scott, and Luckhardt[45] indicate that beverage alcohol in moderation is of value prophylactically in dyspepsia. At mealtime, subjects of the experiments were given small amounts

of beverage alcohol twice in five minutes. Signs of hunger were noted as well as relaxation of gastric tension lasting close to one hour.

From the work of Brock[46]; Adler, Beazell, Atkinson, and Ivy[47]; and Lucia[48] among others, it appears that the moderate use of beverage alcohol leads to a variety of other benefits. The alcohol is utilized directly, completely, and economically. It thus conserves other energy material and does not increase the basal heat production. Further, it has the advantage over most foods in that it does not require digestion. By relaxing the gastrocolic reflex, beverage alcohol eases natural evacuation. And, taken in moderation, it tends to stimulate the liver.

BEVERAGE ALCOHOL IN THE TREATMENT OF ARTHRITIS AND RHEUMATISM

Clearly, beverage alcohol is no cure for arthritis. Yet, it is evident today that the steroid hormones have failed to live up to the expectations held out for them. They do not cure rheumatoid arthritis. There are numerous toxic side effects. Not surprisingly, in a recent survey of rheumatologists, conducted by Solomon[49], it was disclosed that 80 per cent of their patients routinely use aspirin to ease the inflammation and pain of rheumatoid arthritis. The survey further revealed that but few of the polled physicians restrict the use of beverage alcohol, which appears to have value as an adjunct to aspirin or other therapy.

Cecil[50] has said that the analgesic effect of beverage alcohol, in particular, should not be minimized. "A small drink of whiskey will do much to brighten the end of the day for the arthritic patient and usually gives definite relief from pain," he says.

Even in gout, it appears that moderate drinking is non-harmful; and, in fact, my own work has led me to a number of cases in which beverage alcohol has had marked analgesic effect.[51]

COMMENT

With beverage alcohol, as with so much else in life, timing is everything. Obviously, there are times when it is unwise to drink; and these are the times when beverage alcohol is used as a crutch. I would personally advise against beverage alcohol for the person who is extremely worried, depressed, or overtired. On the other hand, in a variety of conditions which the practitioner may face, there are specific indications for the moderate use of beverage alcohol. And, in general, small amounts of beverage alcohol may be relaxing to the person who is under some tension, who is nervous, or who is comfortably tired. For older persons especially, moderate amounts of beverage alcohol bring relaxation, peace of mind, and increased joie de vivre.

SUMMARY

The therapeutic benefits of beverage alcohol taken in moderation are reviewed.

Beverage alcohol is recommended in the treatment of cardiovascular and geriatric cases, my own personal preference being for a light, blended whiskey because of its low congeneric content. It is found of value in the treatment associated with arteriosclerosis and diabetes. It is beneficial in gastroenterology, and is found to ease the pain of arthritis and rheumatism.

For many patients, beverage alcohol used in moderation is considered relaxing, pleasant, of nutritional value, and conducive to improved health of body and mind.

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HEADACHE, with the possible exception of backache, is the commonest subjective complaint of mankind. It varies greatly in location, type, degree or intensity, frequency and duration. It may be indicative of very serious intracranial disease or purely functional. In this presentation, it is proposed to discuss briefly the various types of headache in two general groups: functional and organic. Before definite entities are considered, however, it might be well to stress the importance of a general physical examination and careful consideration of the background and environment of the patient who complains of headache. The temperature should be recorded, a complete blood count and urinalysis made, as well as a blood Wasserman, blood urea, and blood sugar. The blood pressure in each arm should be recorded and skull x-rays made; usually it is wise to have also a chest film made to rule out an unsuspected malignancy or other pulmonary pathology. An occasional lumbar puncture is required, but such a procedure should be done only in selected patients for fear of producing a post-puncture headache in the "functional" cases which would only add to the woes of the patient. The importance of these simple but essential preliminary tests will become evident as the different causes of headache are considered.

A simple statement by the patient that he has headache is not sufficient for the physician trying to get to the real cause of the complaint. It is necessary to spend a few moments in calm discussion with the patient about the details of his headache because there is no term that includes a greater variety of uncomfortable sensations than the term "headache". It varies tremendously in (a) *type or degree:* mild pressure sensation, throbbing (synchronous with the pulse), excruciating, etc.; (b) *location:* unilateral, bilateral, anterior or posterior; (c) and *frequency:* daily, diurnal, nocturnal, monthly, etc. Is it getting worse; is medicine necessary for its relief and if so, what drugs; has the patient lost any time from work because of the headache; is there nausea and vomiting associated with the headache or is there weight loss? These are all-important questions to ask the patient in the initial history-taking interview, and one or more answers to them may give the only real clue as to the kind and causation of the headache of which the patient complains. The examiner should inquire whether the patient's daily work, home situation and similar personal elements in his life are satisfactory and agreeable. Any legal action that might be pending (as in traumatic cases) or imminent hearings before a Compensation Board should be inquired about.

After consulting a number of textbooks on neurology, combined with our own personal experience in clinic and hospital, we have divided the types of headaches into two main groups: (A) Functional and (B) Organic.

(A) FUNCTIONAL

(1) *Psychogenic:* This diagnosis is one of exclusion only. One must be very wary in labeling a particular headache as "psychogenic" before every diagnostic possibility, including air injection in some cases, has been exhausted. With increasing experience, the clinician can often, but not always, identify these cases with greater accuracy and facility. A patient whose chief or only complaint is headache with no objective findings is often one with a psychogenic headache although it is necessary always to be careful of "snap diagnoses" in this respect. Occasionally when the background of the patient is investigated, a personal, marital, business or other problem is uncovered which is the real clue to the diagnosis as emphasized above. Brain tumor and other serious intracranial lesions often do not have headache as their *chief complaint*, oddly enough, but such patients will complain of diplopia, of having had a convulsion or two, or progressive weakness of an extremity; headache is often a secondary matter. Post-traumatically, namely, after a concussion and/or skull fracture, a headache that does not subside with time (if not due to a serious post-traumatic lesion such as a chronic subdural hematoma) is often psychogenic, if not actually due to *malingering* on the part of some patients with a compensation or insurance factor in the injury. Particularly is this liable to be the case in the absence of *objective neurological findings* on repeated examination.

(2) *Migraine* is familiar to all physicians as a functional headache causing real disability. Rather

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frequently, however, it is not the classic type as it may occur almost daily, have no visual phenomena and no vomiting (only nausea) and involve both sides of the head (not unilateral). Gynergen is still the best treatment for migraine, especially when given hypodermically in doses of .5 to 1.0 milligram. The patients can easily be taught to give themselves the drug as diabetics give themselves insulin. In many cases that obtain little relief from the oral use of the drug, great benefit is obtained from giving it hypodermically or in suppositories. Cafergone tablets, which contain ergotamine and caffeine, are useful, as is D.H.E. 45. Mesantoin, one of the anticonvulsant drugs, is definitely helpful in *hereditary* migraine, giving grains 1.5 three to four times a day. Intravenous 50 per cent magnesium sulphate, beginning with 1 c.c. given very slowly and increasing daily to 5 c.c. on successive days, affords relief to many migrainous patients not relieved by Gynergen.

(3) *Histamine* headache is much rarer than migraine but nevertheless is a real entity sui generis. Exquisite hot burning pain develops in one eye (which becomes very injected), associated with marked lacrimation and erythema about the eye and a suddenly occluded nostril on the side of the pain. Ingestion of alcohol almost invariably brings on the pain so that these patients willingly become teetotalers, if only from necessity. A few minims of adrenalin, or of D.H.E. 45, hypodermically, should abort the spontaneous histamine headache and a series of daily intravenous injections, usually five or six, of 1.0 milligram of histamine base in 250 c.c. of normal saline solution given slowly over two or three hours time, usually affords long if not permanent relief. The injection should not induce severe headache. Both this type of headache and migraine seem to be due to vascular imbalance of the intracranial vessels. Bellergal tablets may also help, giving 3-4 tablets a day (*total* quantity).

(4) *Allergic* headache occasionally is met with; elimination of the offending allergen or allergens by an allergist suffices to prevent further attacks; often it is one or more foods or pollens.

(5) *Menopausal headache:* Oftentimes, migraine (in the earlier decades) is transformed into menopausal or post-menopausal headache in the fifth or sixth decades of life. Such cases are difficult to treat. Occasionally hyperostosis frontalis interna (Sherwood Moore's syndrome) is seen on the skull x-ray films. This is a metabolic disorder. Mild sedation will help some patients: aspirin, phenacetin, phenobarbital with tincture of belladonna is a useful combination, as are Bellergal or Cafergone tablets. Miltown or one of the other tranquilizing drugs is of distinct benefit in these patients with a definite nervous tension factor.

(6) *Sluder's sphenopalatine neuralgia* is a curious, functional type of combined facial and head pain extending unilaterally over the head, forehead, mastoid area and neck. In our experience, it is rarely relieved by cocainization of the sphenopalatine ganglion so that our reliance is mostly on the mild sedatives mentioned above in discussing menopausal headache (see #5, supra).

(7) *Post-puncture headache* may be very distressing and of long duration. The best treatment by far is *to remain in bed until the headache is no longer felt* in the erect position. Caffeine is perhaps the best drug for its relief. It is significant that in patients who have had spinal anesthesia for lumbar protruded disc operations and who remain in bed for approximately seven days thereafter, headache is rarely, if ever, complained of when the patient becomes ambulatory.

(8) *Eyestrain:* Not rarely such patients—children and adults alike—are seen in neurological clinics complaining of severe frontal headaches and eye pain. The key to the diagnosis is that the headache is of *afternoon or evening occurrence,* usually developing after using the eyes a great deal in school or in close work of any kind, and the correctness of the physician's impression is proved by the relief obtained by the fitting of proper glasses.

(B) ORGANIC

(1) *Acute generalized febrile illness,* especially typhoid, paratyphoid and undulant fever, influenza and grippe and severe pyelitis with chills and fever are all associated with severe headache at the time of onset in many cases. Malaria may induce chronic headache, even years later. The headache in psittacosis is quite disabling and severe, and the same is true occasionally of Rocky Mountain spotted fever.

(2) *Chronic disease,* especially *hypertension:* The degree of headache in hypertension is not necessarily directly proportional to the height of the systolic or diastolic blood pressure, as some patients appear to think, and not a few internists today feel that headache in hypertension is usually *psychogenic.* Certainly it is true that many hypertensives—particularly of the essential benign type—have little or no headache and the elevation of blood pressure is discovered only in a routine examination for insurance or at the time of periodic physical examination by

the family physician, the patient often being without disabling symptoms of any kind at the time, or at least *until he has been told he has hypertension.*

(3) *Glaucoma:* Severe pain—usually unilateral—in the eye and supraorbitally, perhaps at one time chronic and occasionally (especially in early morning hours or at night after retiring) developing as an acute exacerbation, must always be kept in mind especially in patients in the later decades of life. Expert ophthalmologic aid (possibly an emergency operation) is needed in such cases to preserve vision.

(4) *Tic Douloureux,* involving the first or ophthalmic division of the trigeminal nerve, may be described occasionally as "headache" by the patient or his family. In these cases, as in all individuals with Tic Douloureux, the peripheral and paroxysmal nature of the pain, brought on by pressure at a "trigger point" is the key to the diagnosis. Sudden, severe, lancinating, "sprangling" pain confined to the domain of the 5th nerve is highly typical and, in fact, pathognomonic of Tic Douloureux. Once seen, it is never forgotten. With first division involvement, the trigger point is almost invariably in the eyebrow at the point of emergence of the supraorbital nerve from its foramen. Alcohol injection or avulsion of this peripheral branch of the fifth nerve suffices for complete relief of the pain; later, it may be necessary to avulse the root between the gasserian ganglion and the pons to afford permanent relief.

(5) *Cervical arthritis and occipital neuritis:* Not rarely, a middle-aged or elderly patient complains of "headache" which is located posteriorly, unilaterally or bilaterally. Examination often discloses very tender greater and lesser occipital nerves to palpation by the examiner's thumb and limitation of motion in the cervical spine, especially in backward or side-to-side rotation of the head. X-ray examination usually shows cervical arthritis of greater or lesser degree. If novocaine injection of the involved nerves in the occiput affords relief for several hours at least, avulsion of the appropriate nerves through a small transverse incision in the occipital scalp under novocaine anesthesia should result in complete cure.

(6) *Temporal arteritis,* a rather rare condition: The relatively high incidence of concomitant or preceding mouth infection, plus the fact that the initial pain may occur in the teeth or jaws, suggests the possibility of involvement of neighboring arteriosclerotic arteries by direct extension of local infection. The scalp vessels are tortuous, swollen and nodular. The temporal artery is most frequently affected. Microscopically, the disease is a panarteritis which cannot be distinguished from periarteritis nodosa. The pain consists of a severe, throbbing, steady headache associated with hyperalgesia of the scalp. Pain on mastication is an initial symptom in some patients. Immediate relief usually follows excision of a segment of the involved temporal artery. The disease is self-limited, lasting from one month to over a year and is non-fatal, all cases reported to date having recovered.

(7) *Meningitis and subarachnoid hemorrhage:* These entities occasionally cannot be distinguished from each other without lumbar puncture. We are not referring now, of course, to the acute fulminating prostrated cases but to patients who may still be ambulatory with milder symptoms. Rigidity of the neck is the outstanding symptom in both conditions and lumbar puncture reveals either cloudy or blood-tinged fluid. In benign lymphocytic meningitis, the fluid may be grossly clear and colorless but microscopically 100 or more lymphocytes per cubic millimeter are seen in the fluid. Another characteristic of both these affections is moderate or marked photophobia. Luetic (meningovascular) meningitis must be ruled out by serologic studies of the blood and spinal fluid.

(8) *Encephalitis:* This entity is almost always associated with low-grade fever, lassitude or stupor and frequently with diplopia from paralysis of one or more of the extraocular muscles. Curiously enough, the spinal fluid may show little or no cellular increase but should invariably show an elevated spinal fluid sugar (over 80 milligrams per cent) *in the presence of a normal blood sugar.* Many cases initially designated as "encephalitis" ultimately are proved to be cases of brain tumor or other mass lesion of the brain.

(9) *Post-traumatic headache* tends almost invariably to subside with time unless a serious complication is developing, such as a chronic subdural hematoma. Prostigmin bromide, 15 mg. t.i.d., is valuable if given soon after the injury, as are Bellergal tablets, one of them before each meal and one at bedtime. It is often, but not invariably, associated with vertigo. Strangely enough, it may be said that the intensity of the post-traumatic symptoms is often in *inverse proportion* to the severity of the initial head injury. Some of the very severe head injuries with compound depressed skull fracture and contusion of the brain and subarachnoid hem-

orrhage, or of middle meningeal hemorrhage with marked cerebral compression, are associated with little or no headache after the patients become ambulatory three or four weeks after trauma.

(10) *Skull* diseases, especially eosinophilic granuloma and osteomyelitis: *Eosinophilic granuloma* is a curious bone disease (involving other bones occasionally in addition to the skull) in which exquisite localized tenderness over the lesion is present at a specific point in the skull. X-ray examination reveals the characteristic punched-out rarefied area in the skull; x-ray treatment or surgical excision should result in cure.

Osteomyelitis of the skull is due to four chief causes: extension from contiguous infected (a) paranasal sinuses or (b) mastoid, (c) post-traumatic (compound skull fracture), or (d) "metastatic" from elsewhere in the body, such as bronchiectasis, osteomyelitis of the long bones, or a lung abscess. X-ray examination of the skull is slow in revealing osteomyelitis and occasionally excision of involved bone in the frontal or temporal region is necessary (extension from the frontal sinus or mastoid) *before* x-ray evidence of osteomyelitis is present. Understandably enough, since the advent of the sulfa drugs and the antibiotics, the incidence of these infections has been greatly reduced. One of the most extensive cases of osteomyelitis of the skull seen by the writer occurred years ago in a young colored boy incident to a human bite during a wrestling match. Eventually the greater portion of the skull vault had to be removed before cure was obtained.

(11) *Unruptured intracranial aneurysm:* These cases typically have severe unilateral frontal headache and eye pain with hypoesthesia of the frontal scalp on the side of the pain and often a third nerve palsy, characterized by ptosis of the lid, a dilated pupil and paralysis of inward gaze with associated diplopia. The lesion is verified by an angiogram of the carotid artery in the neck with visualization of the intracranial vessels on the angiogram films. Ligation of the carotid in the neck or intracranial clipping of the aneurysm itself, which ever may be required in the individual case. is carried out. These are always serious lesions and may or may not be associated with a massive subarachnoid hemorrhage. The third nerve palsy is not present in every case of verified intracranial aneurysm, thus making localization of the lesion more difficult in such a case. In patients over 50 years of age, treatment of intracranial aneurysm should be conservative.

(12) *Headache from paranasal sinus disease:* This type of head pain especially when chronic is often so diagnosed when it has little or nothing to do with the patient's real disability. True sinus headache, especially of the *acute* variety, is typically *present in the morning* after the patient has been recumbent in bed for many hours and the sinuses are distended with purulent secretions. Therefore, unless complete blockage is present, it typically tends to subside in the afternoon or evening. X-ray examination in such cases should show definitely cloudy sinuses requiring drainage by the otolaryngologist. In the more chronic cases in which a certain amount of adequate drainage is already present, the importance of the "sinusitis" as a factor in the patient's headache is not so obvious and may be misleading.

(13) *Brain tumor and other causes of increased intracranial pressure:* This particular headache also occurs typically in the morning (often associated with projectile vomiting) as the increased intracranial pressure is greater after the patient has been recumbent and tends to subside later in the day. Headache from brain tumor frequently is not the chief or presenting symptom but may be superseded by a complaint of diplopia, weakness of one side of the body, convulsions or ataxia. If the patient is asked several times, he may finally admit that he has dull morning headache often relieved in the early stages by a cup of coffee or an aspirin tablet. This is in marked contrast to many of the patients with *entirely functional headaches* who complain bitterly during the entire history-taking interview of one symptom only—headache. Excruciating constant headache in brain tumor usually occurs only when ventricular block has developed.

The key to the diagnosis of brain tumor is the presence of *progressive loss* of objective neurological function or the progression of disabling signs and symptoms, such as headache, choked discs, visual failure, diplopia, convulsions, ataxia, etc. Brain tumor symptoms may be apoplectic in onset if acute ventricular block or hemorrhage in the tumor has occurred. Any real suspicion of a brain tumor calls for an air injection of the ventricles to settle the diagnosis. Occasionally, the air injection *should be repeated* weeks, months, or even years later if the symptoms warrant it as even air injections (as with contrast x-ray studies in other systems of the body), in an *early* case of brain tumor may be normal, or equivocal at best.

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Carcinoma of Breast

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CANCER OF THE BREAST is a condition that should be diagnosed early and treated successfully in a high percentage of cases. Unfortunately this is not a fact and we still see too many patients that have far advanced cancer of the breast. Our percentage of five-year survivals is also much too small.

Coller[1] in a review of 1227 cases seen between 1938 and 1947 reported 75% five-year clinical cures in stage one cases, but only 33% in those patients with axillary involvement. He noted that 55% of the primary untreated cases had positive axillary nodes when they were first seen. In his series of cases he saw no difference in the results between those who received and those who did not receive postoperative x-ray therapy, so he reserves postoperative x-ray therapy for patients with overwhelming axillary involvement or for those cases with involvement of the axillary nodes at the extreme axillary apex when the surgeon is not certain this extension has been completely removed. He is a strong advocate of an atraumatic technic with meticulous dissection of the axilla and adequate removal of the skin with primary closure of the wound. Skin grafting of the wound is the exception rather than the rule. He places two drains under the flap and maintains constant suction for several days.

Adair[2] reports five-year survival of 54% of all cases operated upon, with 78% when the breast alone was involved and 39% when metastasis had extended to the axilla. These figures are similar to those reported by Harrington of the Mayo Clinic, by Guthrie and others. He also stresses meticulous care of the wound as the most important single factor in obtaining a good and useful arm and avoiding postoperative lymphedema. The slightest collection of fluid under the skin flaps should be immediately removed by drainage. Adair stated that prophylactic castration was carried out in 335 cases, there being 304 by x-ray and 31 by surgery with the effect that there was approximately 14% improvement in his results. However, he castrated only the very far advanced cases who had extensive axillary metastasis at the time of operation.

Boyd[3], likewise, reports similar survival rates and states that radical mastectomy is deemed unquestionably the best treatment for operable cancer of the breast and the operation should be considered a safe procedure as the operative mortality is less than 0.5%. In spite of these reports and other overwhelming clinical evidence, there are still many who doubt the wisdom of the radical mastectomy and have followed the advice of McWhirter[4] and do a simple mastectomy followed by intensive x-ray therapy for cancer of the breast. A critical evaluation of the material of McWhirter was done by Ackerman[5] who showed there was more morbidity and a higher persistence of the disease in the radiated field than in similar cases treated by radical surgery. He noted that others who have followed McWhirter's work have been unable to reproduce his good results.

In an editorial in a recent AMA Journal, Elman[6] states that mammary cancer is the greatest cancer killer in the United States and many physicians are confused as to the best therapy even for early lesions. He says workers have shown that in untreated cases the five-year survival is about 22%, and 42% for the treated, and that at seven years the rate was only 9% for the untreated and 35% for the treated. Data from all of these reports indicate that the wider use of a thorough and carefully executed radical resection with complete axillary dissection produces the best five-year results.

Lyall[7] recently wrote "It is axiomatic in surgery that one should hold to that which is good until something which is demonstrably better comes along. When that happens earnest men change. I do not believe that the time to abandon the radical mastectomy has arrived." He believes that the thesis of simple mastectomy with postoperative x-ray therapy is a regression in the treatment of cancer of the breast.

It is apparent to those who treat cancer of the breast that McWhirter and his followers have not proved their treatment is as good as the radical mastectomy, but he has stimulated study and research in this field and made physicians realize that, generally speaking, results now are not much better than those of twenty years ago.

From Surgical Service of St. Elizabeth's Hospital, Richmond, Virginia.

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The only new development in the treatment of cancer of the breast has been the addition of hormone therapy. The use of both male and female hormones in the treatment of advanced cancer is accepted and universally used; however, the prophylactic use of hormones has been slowly adopted and even severely criticized.

We know that, if a patient has metastases to the bones several years after being operated upon for cancer of the breast and there is no local recurrence either to the skin or the axilla, the metastases to the bones were probably there at the time of operation but were so small they produced no symptoms and could not be detected by x-ray or other studies. However, they were there as minute embolic transplants. We also know that when large and apparent metastases are present, the administration or removal of one of the sex hormones will, in the majority of cases, cause atrophy and frequently temporary x-ray evidence of complete disappearance of these metastatic growths. So, if this disturbance of the hormone balance will produce these remarkable results in the larger metastases, we have every reason to believe that the same process will occur in the smaller or even microscopic metastases and cause them to disappear completely or will so disturb their metabolism that they will be quiescent for a longer period.

Since 1937 we[8,9,10,11] have practiced this theory and our results seem to be worth reporting. Table 1

Table 1

Statistics

January 1, 1937 - January 1, 1956

Total cases	348
Without axillary metastasis	201
Without castration	158
*With castration	43
With axillary metastasis	147
Without castration	106
**With castration	41

* 4 by x-ray
** 6 by x-ray

Total cases operated upon five or more years	266
Incomplete follow-ups	22
Total cases followed five or more years	244
Patients surviving five or more years	145

shows that there were 348 cases operated upon and that 266 of these were done five or more years ago. Of this number done five or more years, 244 have complete follow-up records. It will be noted that 84, or slightly less than one-fourth of these cases have been castrated. When we first started castration, we did some by x-ray therapy; but even in the hands of the most competent roentgenologist this was unsatisfactory as several of the total of ten so treated began to menstruate again a year or two after treatment. It was felt in order to be certain that castration would be complete, surgical removal of the ovaries was necessary and for the past fifteen years we have done this by removing the ovaries at the time of the radical mastectomy. The percentage of axillary metastases found in this series, namely 42%, is similar to that reported by other authors.

Table 2 deals with those patients operated upon five years or more ago. Of the 266 cases, 244 have

Table 2

Patients operated upon five or more years

Total cases followed	244
Without oophorectomy	183
With oophorectomy	61
Without axillary metastasis	127
Without oophorectomy	95
With oophorectomy	32
With axillary metastasis	117
Without oophorectomy	88
With oophorectomy	29

been completely followed, with 117 having axillary metastases and 61 having been castrated. Of the 244 cases followed, 112 have died of recurrence and 22 died without recurrence leaving 145 or 59% still living after five or more years.

Table 3 gives a more detailed study and break down of the statistics. The 59% survival of all

Table 3

Patients surviving five or more years

Total cases surviving five or more years	145 (59%)
Without oophorectomy	104 (57%)
With oophorectomy	41 (67%)
Without axillary metastasis	103 (81%)
Without oophorectomy	75 (79%)
With oophorectomy	28 (88%)
With axillary metastasis	42 (36%)
Without oophorectomy	29 (33%)
With oophorectomy	13 (45%)

cases, and 81% of those without axillary metastases and the 36% of those with metastases are all similar to percentages reported by Coller, Adair, Elman and others. Our percentages are from 2 to 5% higher but within an accepted variance.

The percentages which particularly interested us were in those cases who had oophorectomies. In all categories, these cases had 9 to 12% higher five-year survival rate, while in other reported series

it is this group of cases, the younger patients, who have the lowest five-year survival rate.

TABLE 4

Total cases operated upon ten or more years	177	
Incomplete follow-ups	10	
Total cases followed ten or more years	167	
Total cases surviving ten or more years	76	(46%)
Total cases operated upon 15 or more years	67	
Incomplete follow-ups	1	
Total cases followed 15 or more years	66	
Total cases surviving 15 or more years	19	(29%)

The ten-year survival percentage is 46% of all cases which is somewhat better than that reported in the literature, as is the 29% for fifteen year or more survival.

While this is a small series, it is one that has been closely and accurately watched and followed. We believe that these results warrant continuation of this practice, and we suggest that others interested in this subject try surgical castration in their cases.

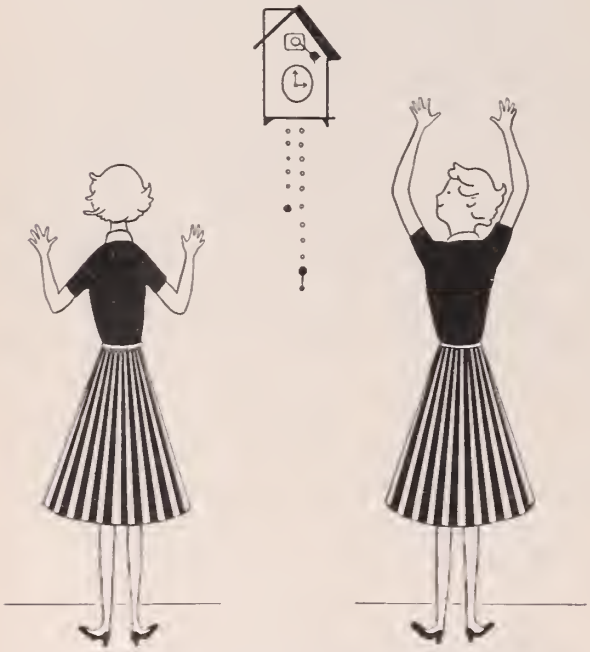


Fig. 1—Wall Hand Climbing Exercise. Patient stands facing wall and works hands up the wall until arms fully extended.

There have been a few changes or additions in our handling of these cases within the past ten years. At first we castrated only those women who were in their pre-menopausal period but now we also castrate patients who are two years post-menopausal. For the first ten days postoperatively, we administer androgen to counteract any estrogen which may be present at the time of operation. Menopausal symptoms and changes in sexual life have been minimal in these young women. This phase has been thoroughly studied and we feel there is no great problem in handling these cases. In previous papers on this subject, we have discussed this in more detail.[10,11]

The postoperative care of the patient with a radical mastectomy is important, and careful attention at this time will reduce the incidence of lymphedema of the arm and will return the patient to an active and useful life in a shorter time.

After the amputation has been completed, the wound is gently and thoroughly washed with warm saline solution in order to remove all clots and so the wound can be more accurately inspected. Hemostasis is most important. For ligatures we use fine (100) cotton as this leaves less foreign material in the wound and produces no tissue destruction as noted when electro-coagulation is used. The skin flaps are brought together with interrupted and continuous sutures under moderate tension. We have found it is necessary to skin graft less than 10% of our



Fig. 2—Rope Turning Exercise. Patient stands facing the door and takes the loose end of a string or rope, and with both the elbow and wrist straight makes as wide a circle as possible with the hand.

cases. Small stab wounds are made in the skin flaps to relieve tension in areas where the skin has blanched. Two drains are placed in the wound, a penrose drain in the lower angle over the epigastrium and a 14 or 16 catheter in a stab wound in the lateral skin flap. The catheter is passed into the axilla and kept clamped. Strong suction is placed on this catheter every two hours for the first two days. It may be continued after that if some drainage is being obtained. We feel that this method



Fig. 3—Broom Exercise. Patient holds broom handle with both hands, with the hands two feet apart. She then raises both arms over the head and brings the broom handle behind the head.

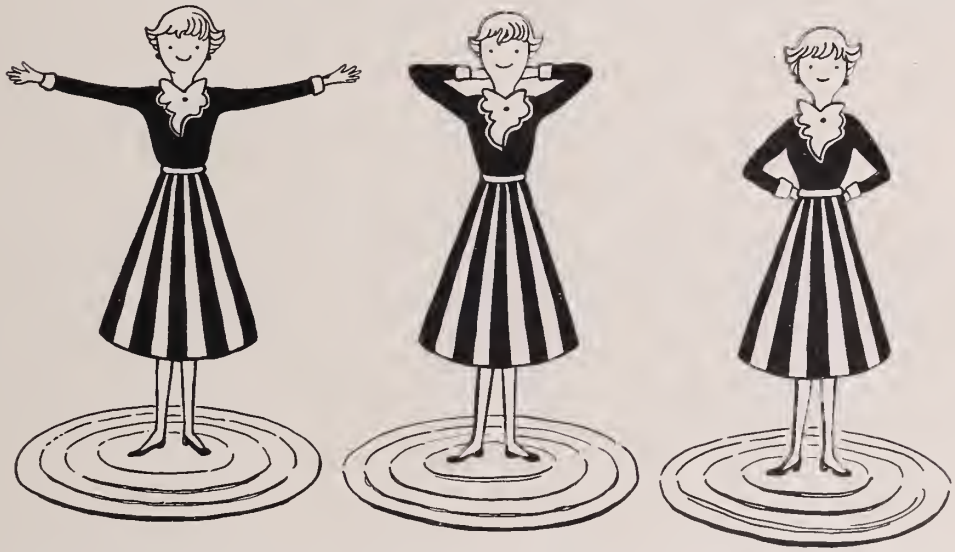


Fig. 4—Arm Bending Exercise. Patient stands straight with feet apart and extends arms sideways to shoulder level. She then lets both elbows touch fingers to back of neck. This exercise is repeated, touching fingers at back of waist.

is better than constant suction as the catheter is less likely to be stopped up with fat or other small particles of tissue.

An abundant but firm dressing is applied and not changed for the first 48 to 72 hours. We find that suction reduces the drainage on the dressing. This type of catheter drainage was first suggested by Murphey[12] in 1947 and we have used it successfully since that time.

The patients are encouraged to use the arm during their postoperative period and, when they return for their first out-patient check up, we give them a little pamphlet on postoperative care and exercise. This pamphlet was prepared by Dr. J. H. Farrow of New York, formerly of Roanoke, and Miss Helen B. Radler. It is of great value and a good morale booster to the patient. In simple words and diagram, the pamphlet explains to the patient what activities and exercises will be beneficial and helps bring on speedy rehabilitation. (Fig. 1, 2, 3 & 4)

SUMMARY

1. A brief review of recent literature indicates that radical amputation of the breast gives the best results.
2. A statistical review of 348 cases, 244 of which have been followed five or more years is given.

3. Surgical castration of the patient who is in the pre-menopausal period or within two years post-menopausal and who has cancer of the breast, has increased the five-year survival rate as much as 9 to 12%. This was true in patients either with or without axillary mestastases.

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Artery Graft Bank

Almost any large community hospital can develop its own artery graft bank without too much expense and without hiring additional highly trained personnel according to three Philadelphia doctors. Writing in the November 24th Journal of the American Medical Association, they outlined their experiences in the Hospital of the University of Pennsylvania.

They noted that the replacement of diseased, obstructed or injured major blood vessels with grafts from the arteries of other persons has gained widespread acceptance. More grafting procedures will undoubtedly be done in the future, but grafts are difficult to obtain. However, experience at the University of Pennsylvania indicates that any large hospital can develop a bank.

The Pennsylvania bank supplies the university hospital, as well as 24 other hospitals in the area. In turn, the hospitals contribute grafts to the bank.

When the bank was started in 1953, a freeze-drying unit was built for less than $500. It has required practically no maintenance. Originally the grafts were obtained under sterile precautions from fresh cadavers free of infection or other malignant disease. The doctors have since learned that any human arteries not showing obvious abnormalities can be used safely. In addition, the strict sterile precautions are no longer necessary. After removing the artery, it is sterilized, placed in sealed glass tubes, quick-frozen in a mixture of acetone and dry ice, and then slowly dried. The changes in procedure made it much easier to obtain the necessary number of grafts.

They also reported on the results with the first 100 consecutive grafts taken from the bank. The operations were done by 17 different surgeons in 10 different hospitals, with the majority at the Hospital of the University of Pennsylvania. Sixty-five grafts were used to replace diseased or obstructed sections of the aorta, the major artery leading out of the heart, while the remainder were used in other arteries in the body. The results were classified as good in 79 of the 100 cases, as fair in two cases and as poor in six. Thirteen patients died; of these, seven had had very poor prospects before operation. Only one "graft failure" occurred after operation.

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Cesarean Delivery In a Private Hospital

A Survey—1933-1954

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THE MARKED RISE in the incidence of cesarean section in this country in the past ten to fifteen years is an undeniable fact. This trend has been defended mainly on the premise that with up-to-date facilities the operation is much safer for both mother and child than formerly and indeed, safer than difficult forceps delivery. Dieckmann states, "cesarean section performed by a properly trained obstetrician is now a recognized procedure for the management of many obstetric and fetal complications formerly treated by vaginal delivery because the maternal mortality attributable to the operation itself is only 0.1% or less. The fetal mortality ascribable to the operation is less than 1.0%."

The object of this paper is to survey our experiences with cesarean section at Stuart Circle Hospital for the years 1933 through 1954. During this twenty-two year period there were 9,950 deliveries, 643 of which were by cesarean section—an incidence of 6.46%. Although these 643 operations were done by nine different operators, 97.5% were done by three individuals. There were four maternal deaths giving a maternal mortality rate of 0.62%. These will be briefly summarized later.

The standard of morbidity used is that established by the American Joint Committee on Maternal Welfare, "A temperature of 100.4 degrees F or 38 degrees C occurring on any two of the first ten days postpartum, exclusive of the first twenty-four hours, constitutes febrile morbidity." The morbidity rate for this study was 23%.

Table #1 shows primary or principal indications for section. In many cases there were also secondary indications but it was felt that these were too numerous to tabulate. It is evident from this table that previous section constituting 28% of the cases, and cephalopelvic disproportion constituting 30% of the cases, are by far the most frequent indications for operation.

If any appreciable decrease in our cesarean section incidence is to be accomplished we will obviously have to reduce the percentage of patients operated upon who have had previous sections or who have cephalopelvic disproportion.

Table 1
Primary or Principal Indications for Cesarean Section in 643 Cases
1933-1954

	No. Cases	Percentage
Previous Cesarean Section	181	28.2%
Cephalopelvic Disproportion	193	30.0%
Uterine Inertia	57	9.0%
Cervical Dystocia	40	6.2%
Placenta Previa	35	5.5%
Fetal Distress	21	3.3%
Toxemia of Pregnancy	26	4.0%
Abruptio Placenta	13	2.0%
Elderly Nullipara	13	2.0%
Rising Anti RH Antibody Titer	7	1.0%
Heart Disease	9	1.4%
Prolapse of Umbilical Cord	7	1.0%
Previous Vaginal Plastic Procedure	3	0.5%
Uterus Didelphys: Septate Vagina	4	0.6%
21 Miscellaneous Conditions	34	5.3%

It has been the policy of the obstetricians on the staff of Stuart Circle Hospital to electively section patients previously delivered by cesarean section. Exceptions to this policy do occur but are infrequent. Repeat operation is done regardless of the indication for the first cesarean section in most cases. We know of no inclination to change this policy. However, 38.7% of the women who have had previous sections at the New York Lying-In Hospital and 35.8% at the Margaret Hague Maternity Hospital are delivered vaginally. It is the belief of the authors of this paper that our present policy is the safest one and we do not advocate a change even though it might result in a substantial decrease in our incidence of section.

It is of interest to note that 45% of the patients in our series who were sectioned for cephalopelvic disproportion had no test of labor. In this group, of course, are included a number of nulliparous women with a breech presentation and a questionable pelvis. In these cases a test of labor might have been unwise. Jones, in his report from the Charlotte Memorial Hospital, stated that 51% of their patients sectioned for cephalopelvic dispro-

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portion had no test of labor. Our incidence of section for disproportion might be lowered by a more frequent use of an adequate test of labor.

Table #2 indicates the effect of the duration of labor on morbidity. As would be expected there is a marked rise in morbidity when the operation is not performed until the patient has been in labor twenty-four hours or more. From our figures it would seem to make little difference whether the operation is done prior to the onset of labor or in the first twenty-three hours of labor.

Table 2
Effect of Labor on Morbidity
1933-1954

	No. Cases	Percentage	Morbidity
Elective cases (Not in Labor)	389	60.5%	20.6%
In Labor Less Than 24 Hours	177	27.5%	22 %
In Labor More Than 24 Hours	77	12 %	36 %

Table #3 shows the effect of vaginal and rectal examinations on morbidity. As expected, those patients who had neither rectal nor vaginal examinations showed the lowest morbidity rate. This group consisted largely of cases in which the operation was an elective procedure and the factors of labor and rupture of the membranes did not enter the picture. There was a rise in morbidity in the group having one to four examinations, perhaps due to some extent to the factors mentioned above. However, contrary to our expectations, the rate did not increase as the number of examinations increased beyond four.

Table 3
Effect of Vaginal and Rectal Examination on Morbidity
1933-1954

	No. Cases	Percentage	Morbidity
No. Examinations	351	54.6%	18.3%
1-4 Examinations	142	22.1%	29.6%
4-8 Examinations	89	13.8%	25.9%
8-16 Examinations	61	9.5%	26.2%

Table #4. Of the other operative procedures performed in conjunction with cesarean section only postoperative packing of the uterus and appendectomy seemed to have any profound effect on morbidity. However, the number of cases involved is too small to permit definite conclusions.

Table 4
Effect of Other Operative Procedures on Morbidity
1933-1954

Operation	No. Cases	Morbidity
Sterilization	120	16 %
Myomectomy	18	22 %
Post operative Packing of Uterus	3	66.6%
Cesarean Hysterectomy	3	0
Appendectomy	2	50.0%
Ovarian Cystectomy	1	0
Spleenectomy	1	0

Table #5 shows the type of operation performed The type of low cervical section utilized in this hospital is that described by Monro-Kerr in which a transverse sub-vesicle incision in the uterus is used. In almost every case in which a classical section was done the low classical technique was followed. The six cesarean hysterectomies were all supracervical in type.

Table 5
Type of Operation Performed
1933-1954

Operation	No. Cases	Percentage
Low cervical	534	83 %
Classical	103	16.1%
Cesarean Hysterectomy	6	0.9%

Table #6 is included simply to emphasize the great increase in the use of blood transfusion in conjunction with cesarean section in the last eleven years of this study. As is evident from the chart in the last six years of this study 78.5% of the patients were given transfusions as compared to only 21.5% in the previous five years. It will be noted that the overall incidence of transfusion for the eleven year period was 59.3%.

Table 6
Blood Transfusions

Years 1944-1954	Total No. Patients	No. Patients Transfused	% Patients Transfused
	521	309	59.3%
1st five years 1944-48	176	38	21.5%
2nd six years 1949-54	345	271	78.5%

Table #7 is a summary of the twenty-two years experience with cesarean section in which the first eleven years period of this study is compared with the second eleven years. It will be noted that the cesarean section incidence has more than doubled in the second eleven years of this study whereas the maternal mortality is lower.

Figure #1 emphasizes the steadily increasing number of repeat sections done in this hospital. In former years patients were often sterilized at the time of the second section. The trend today is to allow each patient more than two cesarean sections. This obviously increases the number of repeat sections.

Table #8 is a comparison of our section incidence and maternal mortality at Stuart Circle Hospital with that of various larger institutions throughout the country. It is of interest to note that at the

Women's Hospital in New York the cesarean section incidence for the years 1951 through 1953 was 12.9%. Meredith explains this high incidence by the fact that they routinely section patients who have previously had sections. He justifies this incidence by the fact that in over 2,000 consecutive sections not one maternal death occurred. This is truly an enviable record.

Table 7

22 Year Summary of Cesarean Section Incidence and Maternal Mortality

Years	Total Number Deliveries	No. Cesarean Sections	Incidence of C. Section	Number of Deaths	Per cent
1933 thru 1943	3,342	122	3.6%	1	0.82%
1944 thru 1954	6,608	521	7.88%	3	0.57%
Total	9,950	643	6.46%	4	0.62%

Table 8

Cesarean Section Incidence and Maternal Mortality

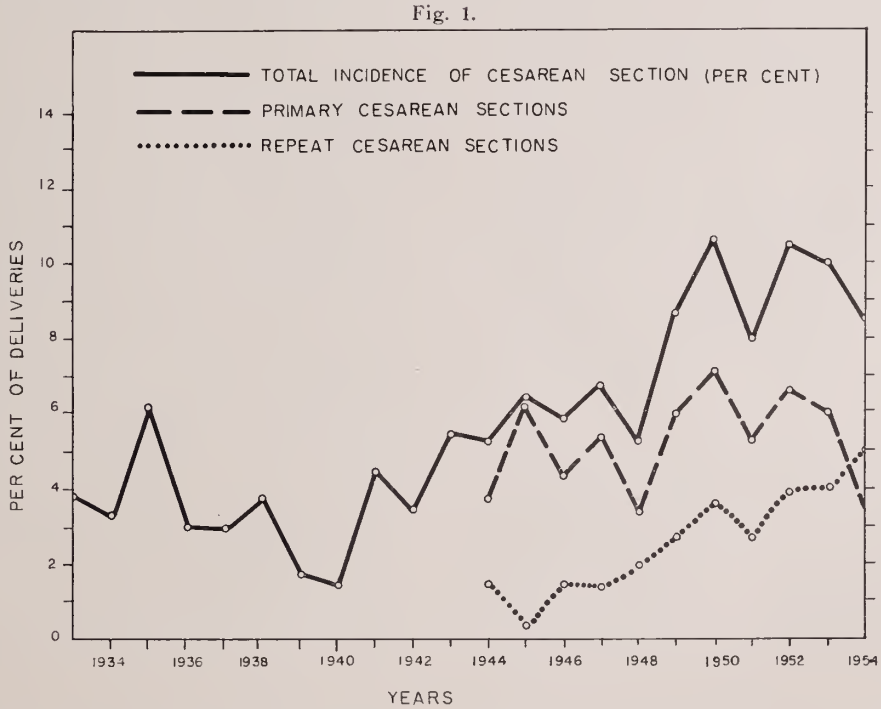
Hospital	Incidence	Mortality
Cedars of Lebanon, Los Angeles	9.7%	0.05%
Millard Filmore, Buffalo	8.16%	0.22%
University of Pennsylvania Hospital	7.0%	0.35%
Pennsylvania Hospital (Phila. Lying-In)	6.9%	0.18%
Stuart Circle Hospital	6.46%	0.62%
Johns Hopkins Hospital	4.8%	0.21%
Chicago Lying-In	4.3%	0.32%
Duke University	1.8%	0.69%
Cincinnati General Hospital	1.0%	1.1%
Grady Memorial Hospital	0.65%	1.59%

Case Report 1#—Mrs. S. J. B.

This 26 year old para I, gravida II was delivered on July 28, 1944, at 39 weeks gestation by low cervical cesarean section. Cyclopropane, helium and ether anesthesia was used. The indication for operation was a contracted pelvis. The patient's membranes ruptured three hours prior to operation but she was not thought to be in labor at the time of delivery.

Her prenatal course had been uneventful and her past history was noncontributory except for a fractured pelvis in 1937. Past obstetrical history revealed a spontaneous delivery of a four pound, six ounce, male infant at approximately seven months gestation after eleven and one half hours of labor, in 1939. Just prior to operation the patient complained of a sharp pain in the upper right thigh and a "mottling of the skin of both legs" was noted. The operation was performed without difficulty but it was noted that the uterus did not contract as efficiently as usual. The operative report states, "there was considerable free bleeding from the uterus and the uterus did not contract immediately." One cc. of

Fig. 1.



The following are the summaries of the four maternal deaths which occurred in our series.

pituitrin was injected into the uterine muscle and ergotrate, grains 1/320, given intravenously. Following delivery of the baby the blood pressure dropped to shock levels and the pulse became very rapid and weak. Despite 250 cc's of plasma, 1,000 cc's of whole blood plus repeated doses of coramine, cortin and adrenalin, the patient failed to respond and died in shock four hours after the operation. The estimated blood loss was 900 cc's. The cause of death was listed as shock due to blood loss and possible drug reaction.

Case Report #2—Mrs. A. L. N.

This 33 year old gravida IX, para I, was admitted to the hospital two weeks prior to term because of two episodes of vaginal bleeding followed by spontaneous onset of labor. After eighteen hours, fifty-one minutes of desultory labor without progress, a low cervical cesarean section was performed under GOE anesthesia. A living six pound male infant was delivered in good condition. The membranes had not ruptured prior to operation. Only one vaginal examination and two rectal examinations were done after admission to the hospital. Indication for operation was cervical dystocia.

Her past history was negative except for her obstetrical history. She had a full term pregnancy with normal labor and delivery in 1934. The baby lived only a few hours and the cause of death was not known. From 1934 to 1942 she had seven spontaneous abortions, each occurring at from two to five months pregnancy. She had had no operations except for a D & E after an incomplete abortion in 1938.

Her first four post-operative days were apparently uneventful except for cyanosis which was attributed to 5 gms. of sulfanilamide placed in the peritoneal cavity at the time of operation. On the fifth post-operative day she developed a fever of 102 degrees F, marked abdominal distention, and nausea and vomiting. These responded to Wangensteen suction. The following day the tube was removed and the patient was able to eat a soft diet for the next six days. During this time her temperature was as high as 100 degrees to 101 degrees F. On the twelfth post-operative day her fever spiked to 102.4 degrees F and the following day she was markedly distended and again nauseated and vomiting. On the thirteenth post-operative day intravenous sulfadiazine therapy was begun and exploration of the abdomen with drainage of "a considerable amount of thickened, greenish fluid" was performed. Culture of the peritoneal fluid revealed Bacillus Welchii. No definite mass was found at the time of the operation but extensive exploration was deemed unwise. Penicillin therapy was begun on the fifteenth post-operative day when her temperature reached 104.8 degrees F. Her fever gradually subsided but her distension continued. A diagnosis of intestinal obstruction due to ileus was made and on her twenty-first post-operative day an ileostomy was performed. She steadily went downhill and died on her twenty-second post-operative day.

Postmortem examination revealed a fecal fistula of the ascending colon through the omentum, and generalized peritonitis due to Bacillus Welchii, with a secondary infection from the fecal fistula. The cause of death was listed as peritonitis due to Bacillus Welchii.

Case Report #3—Mrs. J. A. C.

This 29 year old primigravida was admitted at term, on December 5, 1949, for elective cesarean section. She went into labor the evening of admission and after two and one half hours of labor a low cervical cesarean section was done as an emergency procedure. The indication for operation was cephalopelvic disproportion. A nine pound, three ounce, living male was delivered in good condition. Spinal anesthesia (125 mm of novocaine) was used for operation. The patient received 500 cc of whole blood, 1,000 cc of 5% glucose in saline, and 1/320 grs of ergotrate intravenously, plus ephedrine 1/32 of a gr. intramuscularly during the operative procedure.

Her prenatal course was complicated by cystitis at five weeks gestation which responded to sulfa therapy and a "vague, numb feeling in the right leg around seven months which lasted several days." Past medical history was noncontributory.

Following return to her room from the operating room the patient's blood pressure rose to 216/104 and the cardiac rhythm became very irregular. The patient was extremely anxious following operation and almost became hysterical. Her blood pressure and pulse returned to normal four hours after operation.

Her first five post-operative days were apparently uneventful but by the sixth post-operative day it became evident that the patient was not using her legs. By the eleventh post-operative day the patient had developed complete flaccid paraplegia with absent knee and ankle jerks, right facial paralysis, bladder paralysis and spotty equivocal sensory changes. Spinal tap revealed an elevated spinal fluid proteins with few cells. There were subsequent

dry spinal taps. A probable diagnosis of Guillain-Barre syndrome was made.

The patient's condition remained essentially unchanged until the thirty-eighth day after the onset of paralysis when she began moving the toes of her left foot. This was followed in a few days, by a gradual, but not complete, recovery from paralysis in both lower extremities and the gluteal muscles. During this entire period the patient was afebrile except for an elevation of 100 degrees F on the tenth day of paralysis. Repeated blood counts were essentially normal.

The patient was removed from the hospital against medical advice on her seventy-seventh hospital day. Several days later she was re-hospitalized in another city under the care of a neurosurgeon. Increased intracranial pressure developed as a result of arachnoiditis, and five months after onset of paralysis the left ventricle was explored. Only temporary relief resulted from this procedure and a second operation was performed establishing drainage from the right lateral ventricle to the right pleural cavity. This functioned well until the death of the patient. A period of coma lasting two weeks preceded death which occurred eight months following onset of the disease.

Postmortem examination revealed dense arachnoiditis throughout the spinal canal and the base of the brain and degeneration of the spinal cord in the lower cervical and thoracic regions.

Case Report #4—Mrs. C. B. S.

This 34 year old gravida III, para II, was admitted to Stuart Circle Hospital on February 25, 1937, because of vaginal bleeding at thirty-one weeks gestation. She was moved to this hospital from another hospital in the city where the diagnosis of central placenta previa had been made. She had been bleeding for approximately seven days prior to the admission to the hospital. This bleeding apparently had never been of serious proportions. At the time of admission her temperature was found to be 99 degrees, blood pressure was 106/64, blood count revealed 84.5% hemoglobin with 4,485,000 RBC, 9,425 WBC, with 87% neutrophils. Urinalysis was negative except for a slight trace of albumin. At the time of admission she was not bleeding excessively and a sterile vaginal examination was carried out. At the time of examination the fundus was found to measure 31 cm above the symphysis. The breech was presenting, the cervix was one finger dilated with the placenta easily felt over the cervical os. At this time a diagnosis of breech presentation and central placenta previa was made. A low classical cesarean section and Pomeroy sterilization was performed shortly after admission under cyclopropane anesthesia. A living, four pound, two ounce female infant was delivered apparently in good condition. The operation was uncomplicated. The infant died approximately four hours after delivery. Following the operation the patient's temperature progressively rose with a septic type curve until it reached 106.8 degrees F on the fifth post-operative day. On the third post-operative day the diagnosis of bronchopneumonia was made and the patient was started on pneumococcus antisera therapy. Much difficulty was encountered with abdominal distention and on the fifth post-operative day the diagnosis of peritonitis and pelvic thrombophlebitis was made. By this time the patient was markedly distended with edema of both lower extremities. A 500 cc. blood transfusion was given on the fifth post-operative day and the patient was started on prontosil intramuscularly. Despite supportive measures her course was progessively downhill. She became semicomatose on the seventh post-operative day shortly thereafter.

Postmortem examination was limited to the abdominal cavity and the pathological diagnoses were purulent peritonitis, pyometra, acute inflammation of the deeper tissues of the abdominal wound at its lower angle.

SUMMARY

1. 643 consecutive cesarean sections occurring over a twenty-two year period are analyzed.
2. The effect of various factors on maternal morbidity is tabulated.
3. The increased use of blood transfusions in conjunction with cesarean section is noted.
4. The incidence of cesarean section and maternal mortality at Stuart Circle Hospital is compared with that of several larger institutions.
5. The four maternal deaths in our series are summarized.

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The Role of the Skin in the Expression of Psychological Conflict

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THE SKIN as an end organ of expression is a readily understood concept. It is a boundary of the body between the individual and his environment, communicating between the inner and outer world of the person. The skin plays a prominent part in the individual's self image and in the way he feels he is perceived by others. This concern with body image and its appearance leads to an enormous annual consumption of soaps, powders, perfumes and lotions designed to either retain, improve or camouflage this same appearance. If, therefore, it is usual for the normal person thus to concern himself with his exterior covering, it would seem reasonable for the neurotic individual to choose this organ with its exposure as an ideal site for somatic abreaction.

Interest in psychological conflict as a possible cause of changes in the skin was in evidence in the latter half of the last century.[1] In 1856 Wood described an elderly lady with chronic eczema of the legs, saying, "Circumstances existed at the time which kept her mind in a perpetual state of harassment, and the eczema was relieved by treatment calculated to allay her nervous irritability." A notation[2] in the Medical and Surgical History of the War of the Rebellion, published in 1888, should interest particularly a group of southern physicians. This author grudgingly admitted that medical officers of the Confederate Army recognized "soldier's itch" as an expression of "nervous fatigue" and did not confuse the malady with scabies as did the Union Army doctors.

The skin, because of its accessibility, offers an ideal organ for studying the relationship between emotion and disturbed physical functioning. Every doctor in clinical medicine relies on changes in the the color, temperature, vascularity, turgor and moisture content of the skin in diagnosing and treating disease. Studying general correlations between the condition of the skin and emotion conflict, Mittleman and Wolff[3] found an inverse ratio between skin temperature and conflict. Vaso-constriction with reduced skin temperature was consistent with an increase in emotional conflict, whereas vaso-dilatation with elevation in the skin temperature was synonymous with uninhibited action and emotional security. Patients with skin disease have been compared with normal individuals and more particularly with other types of psychoneurotics on the basis of psychological testing.[4] Those with neuro-dermatitis showed a more marked tendency to turn hostile impulses inward, an overconcern with tactile sensations, and a preoccupation with the reactive outer covering of the body. In the "Draw a Person" test, the outline of the individual which is theoretically an unconscious portrayal of one's self was done with hesitancy and delicacy. Such an interest in the body image is less commonly found among psychoneurotics in general. Patients suffering one of the classical psychoses may also utilize the skin to express certain facets of their illness. A recently treated schizophrenic patient had delusions that small insects were burrowing in her skin. She reacted to this by picking at the skin with a sewing needle attempting thereby to remove these fantasied insects. This continued until most of the accessible skin on her body was covered with small excoriated areas. By disfiguring herself in this manner she had satisfied an unconscious need for self-depreciation.

Attempts to make accurate correlation between specific clinical dermatological disorders with specific psychiatric disorders has been unrewarding and will not be attempted here. One type of emotional conflict may be expressed in more than one descriptive type of skin lesion, and on the other hand one category of skin disease may express multiple areas of psychological conflict simultaneously. In studying such patients, however, five different types of expressive phenomena seem to be present. Rarely do these different types exist singularly but usually appear as a blending or interaction of two or more in the same patient at the same time.

In the first type of expression the skin furnishes a ready outlet for exhibitionistic needs. Many primitive cultures have accepted disfiguring of the skin as a means of signifying station and achievement in the native society. Thus, the individual by incising

From the Department of Psychiatry & Neurology of Medical College of Virginia.
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and scarifying exposed areas of the body could readily exhibit to all the members of the social group his particular caste or rank in the community. More commonly used to designate the undesirables, these trends led to such practices as branding and mutilation of criminals and others who violated the more basic social laws of the group. As recently as World War II it was customary in some countries to shave the heads of those who consorted and openly sympathized with armies of occupation. It is still within the memory and experience of many when facial scars left by the dueling saber were much sought after as a mark of distinction signifying that the bearer had defended his convictions on the field of honor. Even in our culture of today we see remnants of this practice in those individuals who have excessive needs to call attention to their appearance. In satisfying such needs, these individuals utilize tatooing and unusual hair styles as attention-getting devices. Certain patients have been seen who satisfied these same needs by covering the skin of their extremites with fine symmetrical, superficial lacerations inflicted with sharp, cutting instruments. Even in the normal individual, blushing and paling are involuntarily used to exhibit shame and fear. It would seem reasonable then that the patient with neuro-dermatitis utilizes the skin to exhibit to others the presence of disturbing and conflictual feeling within himself.

The second area of expression concerns the substitution of skin changes for hysterical symptoms. In this use of the skin the area picked by the patient for his expressive phenomena is symbolic in itself of the nature of the unconscious wish involved. Hypnosis has been used as a medium in studies of this phenomena. Seitz[5] particularly described a patient with hysterical choreiform movements who was hypnotized and given the suggestion that other symptoms would replace this original reaction. This could only be accomplishd if psychologically equivalent symptoms were suggested. For example, it was necessary to suggest that both blushing and pruritis occur before the choreiform movements would cease. If either of these changes were suggested alone, they would occur but were not sufficient to relieve the original disturbing symptom. A patient recently under treatment showed a severe lichenoid lesion involving both hands to some extent but more particularly the right. The skin was red, thick, brittle and dry, and in effect was part of a more deep-seated hand-washing ritual. The skin changes were caused not only by repetitive washing but by the patient's need to use the hottest water that she could tolerate. Further investigation revealed the presence of extreme guilt feelings associated with masturbation which she considered a dirty, degrading habit. Thus, she discharged two of her unconscious needs; first, the need to punish herself for performing what she considered an evil practice, and secondly, focusing the punishment on her hands, particularly her right hand, which she had used in masturbating and therefore, considered to be the incriminating member.

The third type of reaction in which the skin is utilized in expressing emotional discharge is that associated with grief and suppressed weeping. Heilig and Hoff,[6] in studying herpes simplex, found that it was necessary to suggest an unpleasant or distressing emotional situation to produce herpetic lesions hypnotically. If such an unpleasant emotional element was not suggested, herpes did not occur even though the virus was implanted in the skin. A similar study[7] utilized a blister artificially produced with cantharides. A display of tearfulness was accompanied by exudation at the blister site. Attempts to relax and distract the patient caused a reduction in exudate and in the midst of a therapeutic abreaction, even though the patient wept, there was no rise in exudate. Another patient recently seen had been crying almost continuously for three months since the birth of an illegitimate child. When this patient was faced with commitment to a state hospital, she stopped crying and immediately developed a generalized urticaria. Other authors have described this particular type of lesion as "weeping into the skin".

In the fourth place, the skin is particulary interesting because of its importance as an erotic zone. Earlier literature of this century[8] described that carbon dioxide baths should not be given to individuals who are sexually excitable because this stimulus acts as an aphrodisiac. Tickling, for centuries, has had an intimate connection with sexual life and in some languages there is one word for both tickling and cohabitation. Development of pruritis is usually restricted to erogenous zones, such as the vulva, the scrotum, and the anus. There is a predilection for rather marked changes in the skin when even the normal individual is entering or leaving the period in life of active sexual participation. We are quite familiar with the acne which commonly occurs during puberty in both sexes. In the climacterium the skin frequently shows other changes, namely, pruritis, dryness, scaling, and formication.

Pruritis becomes worse in the warmth of the bed at night and scratching during an attack is extremely pleasurable. Many cutaneous manifestations could almost be considered equivalents of masturbation. A case of eczema has been seen which spread over the entire body and in which scratching by the patient produced an orgasm. There is also the story of the man who refused treatment for his ringworm because he found the sensations from scratching more pleasant than those from sexual relations with his wife. Itching about the anus in men carries readily perceived connotations of unconscious sexual desires. The clandestine feature of scratching re-enforces this concept of erotic equivalence. Most patients with skin disorders scratch themselves in private, will attempt to hide and deny the fact that they actually do excoriate themselves. This clandestine feature is recognized in the vernacular by the definition of home as "a place where one can scratch anything that itches."

Finally, the most important role of the skin lies in its expression of repressed hostility and unconscious masochistic needs. Neurodermatitis has been described as essentially an expressive or discharge type of dermatosis in that the skin expresses anger through itching and scratching. The same mechanism as described previously may also discharge sexual urges which cannot be expressed in normal heterosexual relationship. However, scratching is more frequently found in the service of hostility which cannot be turned outward and hence, is inverted.

Scratching, therefore, for pleasure is secondary to scratching for repressed rage. A dermatitic patient avoids the scratching at first and, as mentioned, will use every effort to conceal this practice. When it is revealed, the patient feels ashamed and inferior, particularly when he recognizes that the scratching itself is a perpetuating factor. This gives rise to a definite paradox in that scratching on the one hand gratifies an erotic need, and on the other hand, gratifies a damaging and destructive need. Patients with neuro-dermatitis undoubtedly have strong unconscious wishes to punish themselves, and intensive scratching has even been called a "partial suicide". Scratching is also a muscular release mechanism for the physiological tension engendered by the repressed rage. Such patients outwardly appear to control and suppress their feelings because they look upon their own emotional vulnerability as a sign of weakness. They are especially sensitive to threatened loss of approval and react to this threat with unexpressed rage. This results in unconscious guilt feelings which are expiated by intensive scratching and excoriation. Scratching then is first a muscular release, secondly, an atonement through mutilation, and thirdly, a gratification of the need for love through cutaneous erotic pleasure.

In summary then it would seem that the skin offers an ideal site for the externalization of many unconscious conflicts within the individual. These conflicts seem to appear in five general areas and to represent the following: exhibitionistic needs, symbolic projection, repressed grief, erotic substitution, and unexpressed hostility. It is hoped that this review, comprehensive and impractical as it may appear, will serve to increase an awareness of the presence of underlying emotional turmoil in external symptoms.

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General Considerations of Office Gynecology

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A GOOD GYNECOLOGICAL DIAGNOSIS cannot be made without a complete history and thorough physical examination. Symptoms such as pain and bleeding must be considered in relation to all body functions as well as evaluated as to location, mode of onset, duration, and severity. Too frequently these fundamental requirements are not met and one often meets patients, even women who have had one or more pregnancies, who have never had an adequate physical examination.

The pelvic examination must be thorough. It is not complete without a bimanual vaginal, a speculum evaluation of cervix and vagina and a recto-vaginal examination. Gentleness is the first consideration. Unnecessary roughness produces discomfort and prevents the relaxation necessary for a satisfactory examination. Many pathological findings are missed because of muscle spasm and guarding. A wide experience on the part of the examiner is the next consideration, the ability to differentiate between the normal and the abnormal pelvis. This experience can be acquired only by taking advantage of the daily opportunities for doing pelvic examinations, not by merely reading of the situations discussed in textbooks. The examination of a child can be facilitated by the rectal and abdominal method. Often a one-finger introital examination is helpful.

The diagnoses of the majority of cancers are made in the office. It is strange that cancer of the vulva and vagina go so long before diagnosis when they are readily visualized by both patient and doctor. A positive biopsy gives the only sure diganosis of cancer; the presence of spirochetes indicates a chancre; chancroid is diagnosed by the finding of Ducrey's bacillus; granuloma inguinale by the presence of Donovan bodies; and a positive Frei test indicates lympho-granuloma venereum.

Cancer of the cervix makes up the bulk of genital carcinomas. To find these, a complete visualization must first be made. Next, to be safe, all cervical lesions must be biopsied. Rule out cancer, then treat the lesion. An application of Schiller's double strength solution to the cervix will show up the hypoglycogenic areas which are most suspected. A superficial currettage of the endocervix will increase the diagnostic rate. It often reveals adenocarcinoma of the endocervix which may be missed by routine biopsy.

Simple benign erosions respond to electric coagulation and, if superficial, may be treated with a silver nitrate solution such as Negatan. A dilute solution of one part to three parts water can be used more extensively. A saturated gauze wick inserted into the cervical os will often clear up a discharge of long standing.

If actual cautery is used, give ample time between treatments. Too frequent and too much leads to parametrial involvement and spread of infection.

Deep cystic lesions and lacerations are best treated with local block anaesthesia since more penetrating heat is necessary. In stubborn cases seen after childbearing, cervical conization may be needed for complete cure.

Vaginal bleeding may be caused by cervical polyps. These are best removed in toto, under anaesthesia, since the base must be included to determine the final pathological diagnosis.

Lesions of the vulva and cervix may give rise to leukorrhea. Only smear and culture and early diagnosis are of benefit.

Parasitic infection has been mistreated primarily because of lack of diagnosis. Usually the unresponsive cases are those that have been undiagnosed. The hanging drop method and Ortho "Trichomonas Dilutent" give the best results in identifying the causative organism. The use of "Nickerson's Medium" (Ortho) has been helpful in diagnosing cases of monilia infection. Although the use of gentian violet in monilia infection is efficacious, it is too messy. Gentrisal (Ortho) provides cure or great improvement in many cases. Unless patients are instructed in the technique of taking douches lying down, they do themselves little good.

Pruritis vulvae may be caused by systemic disease and only specific treatment gives relief. Kraurosis vulvae and leukoplakia are treated by drugs, psychotherapy, and local injections.

Abnormal uterine bleeding in the menopause should be investigated by D. & C. Pelvic examination alone is entirely inadequate. Although Papani-

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colaou smears are not the last word, they should be included as part of the examination.

Most retrodisplacements that cause backache should first be relieved by replacement and supported by pessary before surgical correction is attempted.

The advent of endocrine therapy accounts for a large number of unexamined females who report routinely for their "fix". These preparations are potent drugs and their actions should be understood prior to prolonged usage. Never are they to be used without first ruling out organic disease.

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Improper Use of Drugs

Warnings against the improper use of two types of medicine—drugs sold "over the counter" without a prescription and barbiturates sold only on prescription—were issued in the October 13th Journal of the American Medical Association. The warnings, along with suggestions of how physicians and pharmacists can prevent improper use, appeared in two Journal editorials.

The great danger in using "over-the-counter" medicines lies in misreading or not reading labels, one editorial said. In addition, there is always the possibility of delaying proper medical diagnosis because the individual may temporarily feel well or his symptoms may be "masked" by the drug's action.

Most non-prescription drugs sold today have been proved to be "reasonably" harmless. In fact, they can't be sold without a prescription until trials have shown they have no harmful side effects when taken in the proper amounts. The danger lies in excessive dosage.

The editorial explained that current federal legislation requires a prescription for the sale of any drug which is potentially unsafe when used without medical supervision. However, a manufacturer or even an interested person who believes the prescription restriction is no longer necessary, and has evidence to support his contention, may petition the Food and Drug Administration to allow over-the-counter sales, provided labeling includes adequate directions and warnings.

It is here that physicians have a responsibility. By reporting any harmful side effects resulting from the use of a prescribed drug, physicians may prevent a potentially harmful drug from going on sale without a prescription.

In another editorial, Dr. Harris Isbell of the National Institute of Mental Health, Addiction Research Center, U.S. Public Service Hospital, Lexington, Ky., said that symptoms of barbiturate intoxication have been found to be similar to those of chronic alcoholism.

If, as it appears, alcohol and barbiturates actually cause similar nervous system changes, adequate doses of either should partly or completely suppress symptoms resulting from the withdrawal of the other. This helps explain how alcoholics can substitute barbiturates for alcohol and vice versa. Persons who are intoxicated by barbiturates are menaces, both to themselves and others. For this reason, the medical and pharmaceutical professions bear a heavy responsibility in prescribing and dispensing barbiturates.

Great care should be used in prescribing barbiturates for unstable persons, and such persons should be watched carefully, he said, adding that simple insomnia is seldom a valid reason for using barbiturates. He also warned that physicians should not prescribe a barbiturate for a stranger unless "the indication for the drug is unmistakable."

Prescriptions should be limited in amount and the laws against refills without a new prescription should be strictly observed.

A Look Into the Future—From Capitol Hill

WILLIAM J. KENNARD, M.D.
Washington, D.C.

I WOULD LIKE to be able to come down here and tell you that all is well along the Potomac. If I could do that, we would all enjoy ourselves more.

However, I would be rash indeed to say the medical profession is having its way in Washington. Rash for two very good reasons First, you all know that isn't so. Second, the last thing anyone from the American Medical Association wants to do is to lull the doctors into a false sense of security as far as national legislation is concerned.

Instead I shall be frank and say we have had a difficult year in Washington. True, the doctors of the country were able to shape certain bills in the direction of good legislation But certain others—unfortunate bills under any definition—got on the statute books despite everything that could be done.

Before we go on to the details of some of these bills, it might be helpful to open our eyes and take a broad look at what the political weather has been like in Washington, and to study some of the long-range forecasts. To put the situation into the briefest meteriological terms, humidity has been high, precipitation heavy, and winds strong and destructive.

The professional advice is to batten down the hatches; you are likely to get more of the same thing in the immediate future before the skies clear up again and the storm warnings can be lowered. The trend definitely is toward big Federal Government. More and more federal influence—if not federal control—is flowing out from Pennsylvania Avenue. And each year more and more doctors detect this influence eddying around them and their patients and the hospitals.

What I have said so far is my own opinion, and of course I might very well be wrong to a degree. So I want to read you a statement that represents the considered—and moderate—opinion of the entire AMA Washington Office Staff. It constitutes the opening paragraphs of the Washington Office annual report, which has just been submitted to the Board of Trustees. I quote:

"The last year has been a significant one in national medical legislation, a year that may have strengthened the long established trend for more and more government participation in health and medical activities.

"Perhaps because of fewer foreign affairs crises, the 84th Congress turned more of its attention to domestic issues. While foreign aid and military spending remained in prominence, such domestic questions as school aid, the farm program and desegregation, as well as health legislation, assumed new legislative importance. In the absence of actual threats of war, there is no reason to expect that Congress will reverse itself in future sessions and take less interest in legislation which has the demonstrated popular appeal that health programs carry.

"In the last two years there were few Senators or Representatives who were not actively interested in at least one medical bill of major importance. A total of 18,939 bills were scanned by the Washington Office for medical implications. Of these 571—many with a number of sponsors—were followed through their legislative course. During the two years, 25 were enacted."

In a very factual and objective way, these paragraphs from my office's annual report carry the same information—the Federal Government is on the move in the health fields.

One political party does not have a monopoly on health legislation; 45% of the Congressmen and 86.5% of the Senators had their names on health legislation in the 84th Congress. Hence, every Congressman or Senator you talk with is potentially a proponent of some health legislation.

The bills followed by the Washington Office of the AMA fell generally in the following major groups:

1. Social Security	81
2. Veterans	64
3. Salk Vaccine	36
4. Tax Deductions	36
5. Military & Defense Matters	30
6. Handicapped & Vocational Rehabilitation	29

WILLIAM J. KENNARD, M.D., *Assistant Director, American Medical Association, Washington Office.*

Presented at the County Society Officers' Conference of The Medical Society of Virginia, Lynchburg, September 15, 1956.

7. Drugs, Narcotics and Alcoholism	28
8. Medical Education	23
9. Aged	22
10. Mental Health	21
	370

The total number in major groups was 370. The less numerous groups totaled 160 measures, miscellaneous bills numbered 41, and the grand total was 571.

In addition to the number of bills, and before discussing the specific legislation, let us take a quick look at some of the cost involved in this legislation as shown by the appropriations authorized by the Federal Government.

I should like to point out, both in reference to what I have said above concerning the amount of Federal medical legislation, and further in reporting on the increasing size of Federal appropriations for health and medical services, that I do not wish to imply that the American Medical Association is opposed to these programs, rather I would emphasize that of the 25 bills enacted by Congress in the past two years, the AMA opposed only 3 bills, and supported and assisted in the enactment of most of the others. Likewise, the AMA has supported many measures which have initially included the authorization for the appropriation of funds by the Federal Government. I also want to emphasize that many of these appropriations tend to become permanent and to be increased as will be indicated in the statistics that follow.

We have not as yet completed our study of the appropriations for the current fiscal year. However, for the period from July 1, 1955, to June 30, 1956, Congress appropriated a little over 2¼ billion dollars for health and medical services—an increase of 6.4% over the preceding year. This is roughly 1/6 of the total cost of medical care in the United States and does not include what the states and local governments appropriate for medical care. The federal appropriations, however, for the past fiscal year ending June 30, 1956, were fifteen times the amount needed to maintain Congress and the Federal courts, fourteen times the total budget of the State Department and four times as much as was spent by either the Labor Department or the Post Office Department. Each of three agencies had appropriated over a half billion dollars for health and medical programs. They are: The Defense Department, $818 million; The Veterans' Administration, $790 million; and the Department of Health, Education, and Welfare, $526 million.

Total figures for the current appropriations have not as yet been completed; however, we do know that the research appropriations through the National Institutes of Health were increased 80% above those for the fiscal year just closing. The total was $170.4 million. The Hill-Burton hospital construction program was increased to $125 million—$14 million more than last year. The vocational rehabilitation appropriation was $41.5 million—an increase of $2.7 million. The Indian Health Services were increased $2.3 million to a total of $38,125,000.

Appropriations for health and research are very popular. Part of the responsibility for this rests on a number of segments of the population. The members of the Congress can look around and see their friends die in office of cancer or heart disease. They can see the number of people dying of these diseases increasing, maybe partly because of the increase in longevity. Then, enthusiastic research people, including physicians, appear before the committees and are anxious for appropriations to carry out their work. Armed with this type of support, advocates for increased appropriations to the health field have little difficulty getting support on the floor. Repeatedly larger appropriations are given than are asked for by the government agencies. This phenomenon is unique in the health field.

State and local governments are also spending high in health services. Next to education and the building and maintenance of highways, health services are the largest single expense item in spending of state and local governments. U.S. Census Bureau figures disclose health spending in 1955 was $3.6 billion. Public Welfare spending which also includes an undetermined amount of health expenses totalled $3.1 billion. The health expenses were twice as much as government administration and seven times the money spent on recreation. The health services are divided into $2 billion for hospitals, $1.1 billion for sanitation and $470 million for other health items.

I am not very good at stirring up people, and I am not attempting to do that now. But I think we had better give more thought to defending ourselves, our professions, and the individual freedoms that seem to mean more to us than to many other groups in this country.

Can this drift to the left—this glacial movement of the Federal Government—be stopped? Can it even be slowed? I like to think it can. That cannot be accomplished, in my opinion, by placing ourselves alone in its path. We would be ground

up. But it can be, I think, if we will ally ourselves with other like-thinking people—if we will through them—and with them—create a different political climate, a warmer climate where the light and warmth of reason are allowed to do their work on the legislative glacier.

This would not be an easy course, and for a time it would not be noticeably effective. But if the American people somehow are educated to the gargantuan costs of a swelling Federal Government, and to the dangers that government poses to their own way of life—if this can be accomplished, I feel that medicine as we know it will be safe. Safe for a time at least.

Now, specifically, what happened in the last Congress?

The most damaging reversal for the medical profession, as you know, was passage of the disability payments section of the Social Security amendments. In 1955 this plan passed the House of Representatives by an overwhelming vote, although this was done under a legislative arrangement that allowed no amendment of the bill and only a limited amount of debate.

A year ago a decision was made not only to oppose the disability payments plan in the Senate this year, but to oppose it with all the strength and skill the medical profession could bring into the fight. This decision was one of principle. The disability payments plan is a basic threat to the medical profession. And the decision to continue the opposition was taken in the face of evidence that the majority party would fight to the teeth for this piece of legislation. Our only hope for success, or for even making an impression, was to change the legislative climate. When we began the fight, the Senate seemed to have gone into an election year trance. A vast majority of the Senators were ready to give the voters something tangible, something they could hold in their hand, something they could spend. Not to do so, we were told a year ago, would be political suicide.

To the credit of the AMA, and other organizations and individuals who joined with us in the social security fight, this atmosphere was changed. True, we lost in the end, and the disability payments plan was passed. But passage was by the narrowest of margins—a shift of one vote would have meant defeat for the proposal.

Passage was a defeat for us and it cannot be explained as anything else. But it was not without some consolation. We were able to convince most of the Senators that there are large numbers of people back in their states who will fight against dangerous and financially unsound legislation.

Now for some of the other bills.

You in many parts of Virginia I know are well aware of the new military dependent medical care act, now known as "medicare". It is not exactly what the medical profession wanted, but it could be still farther off. Our major objection is to the authority to rule out civilian hospitals and medical care in certain areas—areas where the Secretary of Defense finds that military facilities are not being used to capacity. In this there is a wide area of discretion and the possibility of a build-up in military medical departments.

This program will go into effect on December 8. Here are its basic provisions. First, all dependents may be treated in military facilities subject to availability of space and capabilities of staff. Second, spouses and children of personnel on active duty are eligible for private medical care in civilian hospitals, paid for by the Government, except, as I noted above, where military facilities are not being used to capacity. Third, beneficiaries such as unremarried widows and parents and parents-in-law may be cared for in military, but not civilian, facilities. Fourth, medical care of dependents will be relatively uniform, no matter where they reside and no matter what military service they are associated with.

Another military medical act is that providing pay raises to physicians and dentists in military service. It does not go into effect until after they have served the two years under the draft. The objective here—strongly supported by the AMA—is to make military medicine attractive as a career.

Closely associated with this is the extension of the doctor draft act until next July 1. This is something to watch. At this time the Defense Department will not ask that this act be extended. But DOD will seek legislation to amend the Universal Military Training Act (the Regular Draft) to authorize the President to make special call-ups of physicians, dentists and allied scientists who are registered deferred and liable under the basic draft.

Also of particular interest to some sections of Virginia, the Congress authorized the President to give the U.S. Public Health Service military status in time of national emergency, as well as in time of war.

The Congress, it seemed to me, went out of its way to offend the medical profession, and at the same time to create staffing problems in the military serv-

ices, when it authorized military medical commissions for osteopaths. This was put on a permissive basis—in other words, osteopaths do not have the full, unquestioned right to medical commissions. Each military department will decide if they are needed and fully qualified.

A number of new acts were passed in the field of public health. One of these is of particular interest to us, because it shows that government controls sometimes outlive their usefulness. This is the law, passed last year, to place the U.S. Public Health Service in charge of a voluntary allocation program for Salk poliomyelitis vaccine. You may remember that at that time fear and panic seemed to be the order of the day in some parts of Washington. A few of the Senators and Representatives wanted the Federal Government to jump into the Salk vaccine picture with both feet—to control the vaccine's production, to control its distribution, to control its use by the physicians. The pharmaceutical houses were not to be trusted, nor were the physicians, and a vicious black market was said to be building up. Well, none of these things came to pass. The voluntary distribution plan worked admirably. And about two months ago the Public Health Service admitted that there was no longer any need even for this voluntary control of distribution. This has been dropped.

The last Congress also authorized a permanent survey of sickness and medical care, a new mental health program for Alaska, a national mental health survey and new federal activity in water and air pollution work. What has become known as the Little Omnibus Health Act provides mental research grants, traineeships for public health personnel and graduate nurses, and earmarked funds for practical nurse training. The same act extends the Hill-Burton hospital construction program for two years beyond its scheduled expiration date of next July 1.

Eventually many physicians in one way or another will come into contact with another federal grants program. This provides for spending $90 million over a three-year period in construction grants to medical schools, hospitals and laboratories doing research in medical problems. At one time there was some inclination to include grants for construction of medical schools—which were favored by the American Medical Association—but this idea was dropped before final enactment.

Most Virginia doctors also were interested in passage of a bill to create a new National Library of Medicine out of the old Armed Forces Medical Library. The books, reports, documents and films will be made more accessible to the practicing doctor. This library most likely will be located in the Washington, D.C. area, although Illinois Congressmen made a stubborn fight to have it situated in Chicago.

In the closing days of the session, Congress enacted a program of which not much had been heard up to that time. This provides that dependents of foreign service employees in the State Department are entitled to hospital and medical care up to 120 days, while located overseas, with the dependents themselves charged for the first thirty-five dollars of any illness. Also, the United States will pay the charges for health insurance written, if insurance is used, for employees or dependents of such State Department personnel, and for their transportation to and from hospitals or clinics when overseas. Some 13,500 dependents are covered by this law.

WHAT'S AHEAD

There is no reason to believe that there will be diminution in pressure for increased government participation in health programs. There is little difference in the Republican and Democratic platforms. Both platforms support federal aid to medical schools. The Republican propose "federal assistance to help build facilities to train more physicians and scientists", which is in line with the "bricks and mortar" approach of the laboratory facilities bill passed by the last Congress and the Eisenhower aid to medical education bill that was not enacted. On this issue the Democratic plank is more general, stating: "We pledge ourselves to initiate programs of federal financial aid, without federal controls, for medical education," without differentiating between construction and equipment aid, and grants for operating expenses.

Aid to Hospital Construction, Medical Research, and Vocational Rehabilitation—Planks are similar and imply continued or increased support.

Medical Care—Republicans pledge support to voluntary health insurance and urge that reinsurance and pooling arrangements be authorized to speed the program. The Democrats pledge increased federal aid to public health services, particularly in rural areas.

Mr. Stevenson, in his Labor Day speech, proposes new programs for medical research, increased hospital facilities and increased numbers of physicians and nurses in training and "the formation of comprehensive plans of private voluntary prepayment health insurance with provisions enabling the pur-

chase of such insurance by families who are themselves now unable to afford them."

At the present time a committee of the House of Representatives is collecting information on medical education with the object of proposing legislation to relieve "the shortage of doctors and nurses". We have received inquiries at our office for information from members of Congress also interested in this question. So it is probable that a major step will be taken in the next session of Congress to provide additional facilities for the training of physicians at least.

New efforts have been started for United States employees health insurance. At the request of Congress, information is being gathered on the practicability and probable cost of a program of basic health insurance for United States civilian workers, financed partly through payroll deductions and partly through federal contributions. The survey is the outgrowth of hearings conducted last session by the House Post Office and Civil Service Committee on a proposal for major medical cost insurance, with the premium paid entirely by the United States.

No legislation resulted from the hearings, after the plan was opposed by Blue Cross and Blue Shield, American Hospital Association and some spokesmen for labor. They maintained that the first step should be basic protection, handled through payroll deductions. Most spokesmen for federal employee unions supported the castastrophic insurance proposal as the best thing obtainable at the time. Then the administration refused to endorse payroll deductions.

To resolve this problem, Chairman Tom Murray (D.,Tenn.) of the House committee called on the General Accounting Office to make its own survey of the situation and report back to him by December 31 on the "feasibility and estimated probable cost of administering a payroll deduction system for basic medical protection for federal employees." Should GAO find that the proposal is feasible, Congress might enact a basic insurance program in spite of administration objections.

We can expect, I believe, almost every subject in the medical field covered by some form of legislation with the possible exception of night calls which so far has not been mentioned in any of the federal legislative proposals.

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Confuse Blood Pressure Meter

A more accurate reading of blood pressure in obese persons can be obtained by measuring the pressure below the elbow rather than above, as is usually done, three New York physicians have stated. They said that falsely high blood pressure readings may be obtained in people with large flabby upper arms. The reason for this is not entirely clear, but it may be due to the larger circumference and the compression of flabby tissue in the upper arms. (November 3 Journal of the American Medical Association.)

In experiments with non-obese persons, one arm was loosely wrapped with cotton which was compressed by the blood pressure cuff. The reading in the wrapped arm was much higher than in the unwrapped arm. However, when less-compressible gauze was used, there was only a slight difference in the readings in the two arms.

The authors also found that persons with large—but muscular—upper arms did not have falsely high blood pressure readings, apparently because the muscular tissue is not compressible.

In obese persons with flabby upper arms, the doctors measured the blood pressure internally by inserting a needle into an artery. They then compared that reading with readings obtained in the forearm and the upper arm. The arterial pressure was similar to that of the forearm.

The authors are Dr. Kenneth W. Trout, Hillsdale, N. Y., and Dr. Charles A. Betrand and M. Henry Williams, Valhalla, N. Y.

Clinicopathological Conferences

Of The Medical College of Virginia Hospital

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Case #187(A-7556)

A 44 YEAR OLD married Negro "asphalt raker" was admitted to the emergency room in a semi-comatose state.

The patient was apparently well when leaving for work, but soon after arriving he suddenly collapsed, fell to the floor, but did not have any convulsive movements. On arrival in the emergency room he was in profound shock, with profuse perspiration, and complaining of some slight chest pain. Shortly after admission he was given 15 mgm. morphine sulphate because of violent behavior, and thirty minutes later 7.5 mgm.; then 1,000 ml. dextrose in water containing 4.0 ml. 1% norepinephrine, followed by 500 ml. whole blood. Sometime later, when he aroused from his semi-comatose state, he stated that he felt fine, recalled going to work, and did not have any headache or dizziness.

There was a record of hypertension in 1950 when he was seen after an automobile accident. At that time he had a contusion of the left kidney, fracture of the left 10th, 11th, and 12th ribs, and a puncture wound of the left chest wall. The blood pressures were recorded from 140-180 systolic over 80-110 diastolic with one pressure of 240 140. He had been rejected by the Army because of hypertension. From what could be ascertained, his health had been otherwise good. The review of systems was not remarkable except for headaches several times a week. He slept on two pillows, but there was no breathlessness on exertion. His weight was stable. There was nocturia two times a night.

Physical examination on admission disclosed the following: T. 96.2, P. 100, R. 24, and B. P. 0/0. He appeared well developed and well nourished, acutely ill, in profound shock. The skin was cold and moist. The orbits appeared slightly edematous, and there was some edema of the conjunctiva. Right pupil slightly larger than left, but both reacted to light and extra-ocular movements were intact. The sclerae were muddy. The fundi showed Grade II hypertensive changes with physiological cupping of the discs. Further examination of the head and neck was not remarkable. The lungs were clear. The left cardiac border was percussed 9.0 cm. to the left of the MSL. The rhythm was regular. The heart sounds were faint and of poor quality with A_2 greater than P_2, and there were no murmurs. The abdomen was flat, tense, and peristalsis was absent. A small epigastric hernia was present. Some tenderness was noted to deep palpation in the upper abdomen. The extremities were negative except for cyanotic nail beds, and when the shock had improved, the dorsalis pedis pulses were palpable.

The neurological examination showed no apparent sensory disturbance. A slight right facial weakness was questionable. The tongue protruded in the midline. He moved all his extremities but the deep tendon reflexes were absent in the lower extremities. There was a normal abdominal reflex, a negative Babinski, but absent cremasteric reflex.

Laboratory findings: No record of a urinalysis, Hbg. 11.4, WBC 17,500 with 70% neutrophils, 2% eosinophils, 27% lymphocytes, and 1% monocytes. Immediate blood sugar (?after glucose) 286, BUN 22 mgm.%, CO_2 21 mEq L, chlorides 101 mEq/L. Serum amylase 90 units activity. A lumbar puncture showed a clear spinal fluid under pressure of 267-270 mm. of water. There was 1 lymphocyte, 20 mgm.% protein, and 94 mgm. % sugar. He was seen by a surgical consultant, who found the epigastric hernia acutely tender but no other findings.

The next day he apparently continued in a semi-shock like state, with blood pressure around 120/100. A repeat serum amylase was 58 units. It was noted that a large tender right upper quadrant mass was now palpable, and it was thought to be the liver. Penicillin and Streptomycin were given. A roentgenogram of the chest showed the heart to be enlarged both to the right and left with marked enlargement of the aorta. Patchy densities were present in both lower lung fields and were more marked on the right.

A repeat hemoglobin was 12.4 gm/100 ml., WBC 11,000 with 73% neutrophils, 1% eosinophils, 24% lymphocytes and 2% monocytes. The absolute eosinophil count was 5 per cu. mm., blood sugar was 210 mgm.%, and serum electrolytes were Na 133, Cl 103, K 5.0, CO_2 12.5 mEq/L. A serum bilirubin was 1.7 mgm. % immediate and 3.6 mgm.% total. An EKG taken on the first day showed indeterminate ST changes and frequent premature contractions, and the second day left ventricular strain and sinus tachycardia.

The blood pressure began to rise on the second hospital day, and during the early morning hours of the fourth day was recorded as 230-240/115-140. Rectal temperatures were 99 to 100.2, the pulse steady at 95 and respiration between 22 and 35 during the admission. In the morning of the fourth hospital day the house officer was called because of absent pulse, respiration, and blood pressure and when he arrived the patient had expired.

CLINICAL DISCUSSION

Dr. Howard M. McCue, Jr.*: This is the case of a 44 year old Negro man who was a known hypertensive of several years duration and probably longer. On returning home from work he suffered sudden collapse, apparently with profound shock, probably stupor. On arrival at the hospital he is described as complaining of slight left chest pain. The character of the pain is not further described and there is a question in my mind as to his ability to give history, considering his condition.

On examination, he was found to have a temperature of 96.2°, probably associated with shock. Pulse 100. Respirations of 24 per minute. Blood pressure was recorded as 0/0. He is described as having orbital edema, the cause of which is not clear to me. He is also described as having inequality of the pupils. Said to respond adequately to light, and extra ocular movements were normal. Again there is not a very clear-cut cause in my mind. He might possibly have some involvement of the upper sympathetic chain on one side. Lungs are clear. Heart described as normal in size clinically. Subsequent x-rays did not bear this out. Sounds were faint, with no murmurs, and A_2 described as greater than P_2; presumably the aortic valve was working and not insufficient, although with a very low blood pressure; it is very hard to conceive of the second sound being accentuated. Abdomen had absent peristalsis and some tenderness on deep palpation of the upper abdomen. Small epigastric hernia. Extremities were reported as negative. Dorsalis pedis pulses were good after the shock improved and I presume the radical pulses returned, as there were subsequent blood pressure determinations in the arms and there was probably adequate arterial supply to both arms. Only neurological finding in the extremities was the absence of deep reflexes in the legs. Again this is a vague and indefinite finding. It should be noted that the cerebral spinal fluid pressure was increased.

As regards the laboratory work, there was slight anemia even after blood transfusion and rather marked leukocytosis. Apparently no urinalysis was done. Blood sugar found to be 286 but it was thought this possibly was connected with I. V. glucose. A later fasting blood sugar was 210, which is definitely abnormal. BUN and CO_2 were normal at first. A later CO_2 was down. Patient apparently became acidotic. Sodium, potassium and chloride levels were done at a later time and were within normal limits. Amylase was 90 units on the first day which is normal, 58 on the second day, which is a low normal. It should be noted that in pancreatitis the amylase is elevated only in the early hours of the disease. An electrocardiogram was reported as showing left ventricular strain and premature beats only. There is some slight S-T elevation on the first day and the development of negative T-Waves in Leads I, AVL, V-3, V-4, V-5 and V-6 on the second day. There were no QRS changes. Chest x-ray showed generalized cardiomegaly, with marked aortic enlargement. I believe this latter is an important finding. There were patchy densities in both lung fields. I should like to ask Dr. Mandeville at this time to comment on the x-rays.

Dr. Frederick Mandeville*: There is generalized enlargement of the heart, more particularly the left ventricle. A widened aortic arch with the convexity of the right aortic margin merging with the origin of the innominate artery (Fig. 1). The right diaphragm is slightly elevated with mottling of the lower lung field compatible with congestion and pneumonic infiltration. There are no double contours characteristic of typical dissecting aneurysm.

Dr. McCue: Subsequent course was as follows: Blood pressure gradually rose. He was treated with both levophed and blood. Amylase fell but remained within a normal range throughout. A large tender right upper quadrant mass developed, thought possibly to be the liver. I don't know what this mass was. It might have been the liver. It is interesting to

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Fig. 1—Enlargement of heart with prominent left ventricle and widened aortic arch.

note that the epigastric hernia became tense and tender. The serum bilirubin was 1.7% direct, with 3.6 mgm. % total. This is an increase in both the direct and indirect acting serum bilirubin. Such a change can be produced by severe extra-hepatic biliary obstruction. The thought that enters my mind is that of a combination of hemolytic jaundice plus extra-hepatic biliary obstruction. The fasting blood sugar was subsequently found to be 210. This is definitely in the diabetic range and certainly raises the question of pancreatic function. It could be due to pre-existing diabetes which might not have been diagnosed or it might be due to acute severe derangement of the pancreas from another cause. The possibility of adrenal or central nervous system lesion in the vicinity of the pituitary must also be considered. The absolute eosinophil count was 5 which is low. This might be a manifestation of a stress reaction. I realize this term covers many things. It is difficult to pin down just what a stress reaction constitutes. Tachypnea and tachycardia persisted. There was sudden death on the fourth day.

Several questions might be raised. Serology is not reported. With an enlarged aorta this might be of some interest. No urinalysis was done. It would be interesting to know the results of this determination. In addition, we can find no record of urine out-put. The profound shock raises the important question regarding renal function and we would certainly be most interested to know what the urine out-put was. We should also be concerned with whether adynamic ileus continued and whether abdominal distention continued. We come now to the differential diagnosis. With any sudden onset of severe vascular collapse, myocardial infarction must be considered. The electrocardiogram was not characteristic and there was no substernal or epigastric pain. It has been our experience that more infarcts are silent clinically than electrocardiographically, but the absence of substernal pain and characteristic electrocardiographic changes are very much against this diagnosis. Cerebral vascular accident should be considered. There was reasonably prompt recovery so far as level of consciousness was concerned, and the lack of localizing neurological findings is against intra-cerebral hemorrhage. The spinal fluid was not bloody. This rules out subarachnoid hemorrhage. Pancreatitis must be strongly considered. The lack of abdominal pain is against it. The amylase was not high enough even though done very early. The abdominal mass is of interest and the blood sugar changes are suggestive of acute hemorrhagic pancreatitis. I believe there is too much evidence against pancreatitis to consider this very strongly. The rupture of a luetic aortic aneurysm should be considered. The major point against this is that this man lasted for four days. I have never seen a ruptured aortic aneurysm that survived this long. We come lastly to the diagnosis of dissecting aneurysm of the aorta. I think this is a very likely consideration. He was a male. This disorder is more frequent in males. He was in the fifth decade of life. It is most common in the fifth and sixth decades. He was a known hypertensive. The great majority of dissecting aneurysms occur in hypertensives. Widened aortic shadow is certainly a relatively characteristic finding. Very explosive onset, with rapid development of shock and stupor. A notable absence to be considered is the lack of crushing or tearing pain. As frequently happens, the sudden shock and clouding of consciousness can explain this lack of pain. In other cases, pain has been described as minimal. The fact that there are no electrocardiographic changes of infarction is another point in favor of dissecting aneurysm to explain sudden vascular collapse. The most frequent or usual site of dissection is in the ascending portion of the arch of the aorta. The next most frequent site is the isthmus in the region of the ductus. Because of the persistent adequate arterial pulsation in both arms, I suspect very strongly that the dissection occurred in the region of the isthmus. Dissecting aneurysms can produce several clinical syndromes. I feel, in this case, it has produced an abdominal syndrome, with retro-peritoneal bleeding and with dissection of the mesenteric vessels and celiac artery. About 75% of all dissecting aneurysms terminate with rupture into the pericardium and because of

this frequency of occurrence and the sudden demise, I suspect that is what ultimately happened in this case. Unquestionably, the persistent pulse in all four extremities is somewhat against dissecting aneurysm but I think there is too much evidence in favor of it. I believe this is the diagnosis.

DR. HOWARD M. MCCUE'S DIAGNOSIS

Dissecting aneurysm of the aorta with rupture into the pericardial sac.

PATHOLOGICAL DIAGNOSIS

Ruptured dissecting aneurysm of the ascending aorta with resultant hemopericardium.

Diabetes mellitus—latent.

Hypertensive encephalopathy.

DISCUSSION OF PATHOLOGIC FINDINGS

DR. GORDON R. HENNIGAR*: The heart weighed 800 grams, the increased weight was due to concentric hypertrophy of the left ventricle. This is the morphologic reflection of hypertension as there was no other demonstrable cause for ventricular strain, e.g., aortic stenosis, aortic insufficiency or other valvular disease. The pericardial sac contained 1300 ccs. of freshly clotted blood. In the myocardium were several small foci of ischemic necrosis and subendocardial hemorrhage in the left ventricle was noted (Fig. 2). A transverse intimal tear just above the sinus of Valsalva was noted (Fig. 2). The tear extended through the entire wall and perforated the aortic reflection of the pericardial sac. Extending cephalad, a dissection of the media for a distance of several millimeters was demonstrated. Congestion and edema only were found in the lungs. Although no pathognomonic lesions of diabetes mellitus were found in the islets of Langerhans and glomeruli, the marked renal hyaline arteriolosclerosis with basophilia leads us to believe the patient had diabetes mellitus. There was marked hypertensive encephalopathy and an enlarged liver due to congestive hepatomegaly was demonstrated. This accounted for the elevated serum bilirubin and the mass felt clinically.

From the pathological standpoint, this case runs true to many previous cases in the autopsy files. During the past 20 years some 70 cases of dissecting aneurysm of the aorta are in our autopsy records at the Medical College of Virginia. Ninety per cent of these have occurred between ages of 50 and 70 in people who have had clinical and/or morphological evidence of moderate to severe hypertension. The remaining 10 per cent comprise dissecting aneurysm with severe coarctation of the aorta (in these, fatal rupture was a not uncommon cause of death), cases of traumatic dissecting aneurysm with fatal rupture (usually steering wheel accidents), and lastly, three cases have occurred in people with Marfan's syn-

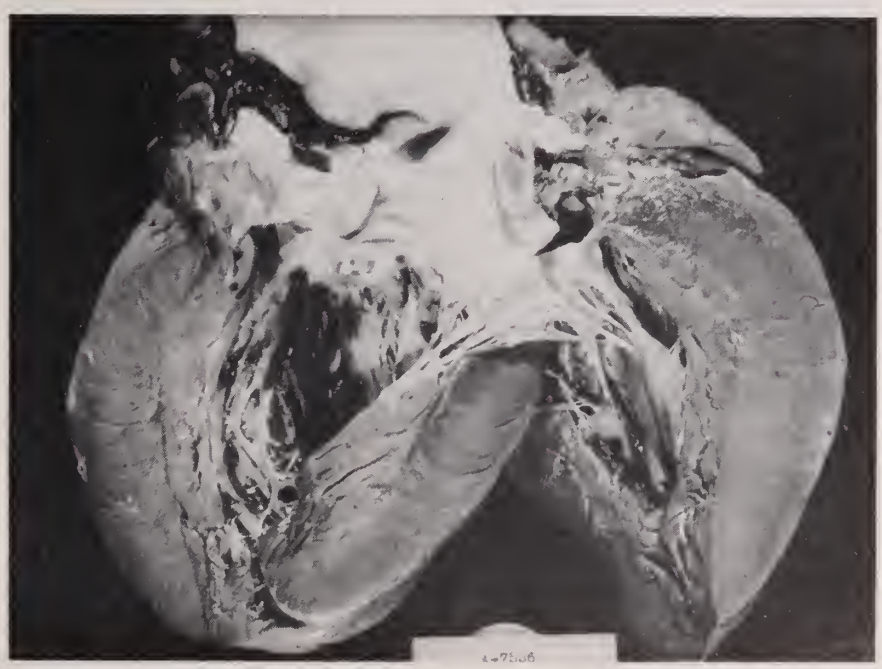


Fig. 2—Left ventricle is hypertrophied and a long transverse intimal tear is seen. Subendocardial hemorrhage is marked.

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drome—a heritable disorder of connective tissue. Fatal rupture of dissecting aneurysm usually occurs into the periocardial sac or the pleural sac. Unlike the syphilitic aneurysm it has no notable tendency to rupture into the trachea, esophagus, pulmonary artery or lung. Syphilitic aortitis plays no role in etiology or pathogenesis of dissecting aneurysm. Furthermore, dissecting aneurysm differs from atherosclerotic aneurysm in that the latter occurs in the distal portion of the aorta and sometimes erodes into the vertebral bodies.

The exact etiology and pathogenesis of the change which occurs in the *media* and *intima* of the aorta is not exactly known. This change was described many years ago by Erdheim under the designation of cystic medionecrosis. This change is characterized by the presence in the media of basophilic material which is metachromatic and probably consists of complex mucopolysaccharides and glycoproteins. No fatty materials have been demonstrated to be present. In our laboratory we have shown that this change is not only present in the media but also in the intima. Gore and others have clearly proposed that this material may accumulate in the media as a result of elastic tissue and or muscle degeneration. To us this seems entirely feasible because the identical basophilic material has been demonstrated in the media of ageing aortas particularly if the patient has some degree of hypertension. Special strains of such aortas reveal scanty and thin elastic and muscle fibers (Fig. 3). The strain of hypertension would surely speed up this "ageing" phenomenon. In other cases such as Marfan's syndrome there is mesenchymal defect with diminution in number of elastic fibers and the thickness of the aortic wall as well as the presence of the resultant basophilic material.

Once the background of cystic medionecrosis is laid, through mechanisms which are as just stated not entirely clear, a slow or rapid series of events in the hypertensive patient may follow. We have seen a few instances demonstrating the slowness of chronicity of the process resulting in chronic dissecting aneurysm without rupture. One of these which occurred in a 52 year old woman dissected the mouths of the orifices of renal arteries giving arise to partial renal ischemia and the Goldblatt phenomenon which resulted in malignant hypertension and death in azotemia. Still another case dissected the orifice of one coronary artery and the dissection extended into the coronary artery for a short distance with the patient dying as a result of myocardial ischemia. Lastly we have seen as many as three independent chronic dissecting aneurysms in the same aorta. The aortas of these cases frequently show scars of the intima where the original intimal tears have healed. These patients with chronic dissecting aneurysm will frequently give a history of recurring episodes of mild or severe chest or back pain and are frequently diagnosed as attacks of coronary insufficiency. Sometimes these episodes can be appreciated by examination of the aorta in that there are varying

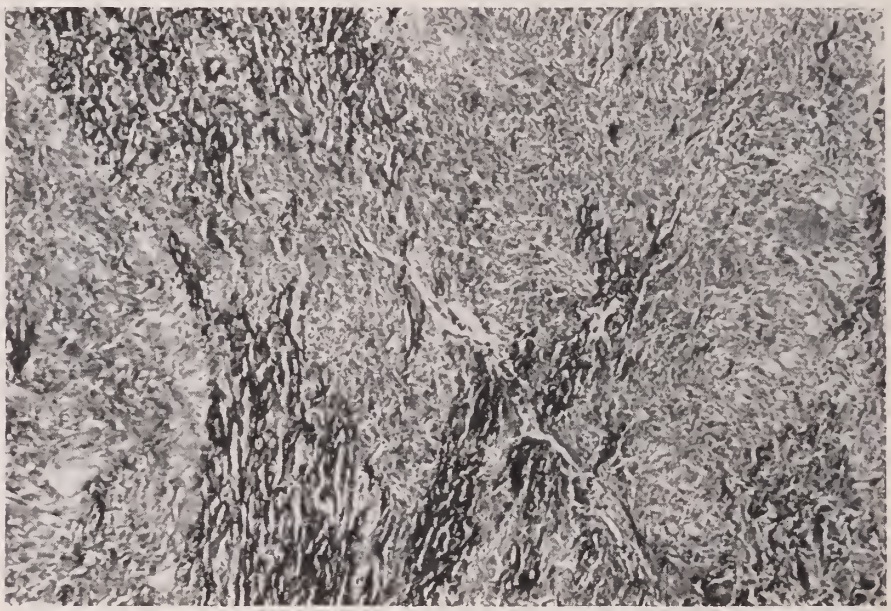


Fig. 3—Verhoeff-van Gieson stain of aortic wall showing marked destruction of elastic tissue.

degrees of endothelialization of the dissection sacs within the wall of aorta. I have seen atherosclerosis and calcification of the lining of the dissection sacs in which the patient suffered severe pain several years previous to the terminal rupture of chronic dissecting aneurysm. Far more common than the chronic dissecting aneurysm is the acute or recent dissecting aneurysm. Intimal tears are almost invariably demonstrated and the length of dissection may be either a few millimeters as in the case presented today or a number of centimeters in length. In the literature are described cases of sudden spontaneous or acute rupture of the aorta. These are simply cases of ruptured aneurysm in which the length of the dissection is short. Cystic medionecrosis is invariably present.

Mysteries involved in the understanding of the etiology and pathogenesis of the dissecting aneurysm are manifold. Among these are: (1) etiology of the tear, (2) rare cases in which no tear is demonstrable, (3) the almost consistent location of the dissection in the ascending or arched portion of the aorta, and (4) the etiology and biochemical changes which bring about the basophilic material in the wall of the aorta.

As to the first of these, it is thought that hemorrhage occurs within the wall due to the rupture of poorly supported vasa vasorum (since degenerated muscles and elastic fibers are replaced by basophilic material) or ischemia to the media by hypertensive arteriolosclerosis of the vasa vasorum causes infarction of the media. Once intramural hemorrhage is established it ruptures through the intima. Via this rupture site known as the intimal tear blood rushes in from the lumen of aorta and forces the separation of the medial wall giving arise then of dissecting aneurysm.

In those cases in which the intimal tear has not been found it is probably healed over by scar tissue. Contrariwise, rough handling of the aorta may account for the reported cases of numerous intimal tears.

The ascending portion and arch of the aorta are somewhat stable and fixed to the main pulmonary artery by a common pericardial reflection. The arch of aorta is somewhat stabilized to the pulmonary artery by the ligamentum arteriosum. Whether these points of relative fixation are important determining factors in the selective occurrence of the dissection at these points is controversial.

Lastly, the common denominator in dissecting aneurysm regardless of predisposing factors is cystic medionecrosis. The etiology of this change may be an ageing wear and tear process with the basophilic material resulting from degenerated elastic and muscle fibers and the process brought about or accelerated by the additional work of the aortic wall in hypertensive patients.

In summary, the case today represents a hypertensive patient who was subject to acute dissecting aneurysm with terminal, fatal, massive hemopericardium.

Let's Reminisce!

Dr. E. T. Williams, Roxbury, Mass., in a letter to the Boston Medical & Surgical Journal, June 11, 1874, suggests that, instead of the obstetric binder to produce pressure on the uterus during labor, a sheet be twisted loosely in the form of a rope, and tied together at the ends. Let the patient put her feet into the loop at the lower end and push; grasp the other end with her hands and pull—the power thus exerted is indefinite; it is the gymnastic paradox of trying to lift oneself, and may be practiced, if desired, until the sheet or back gives way. Its effect in labor is surprising, and is immensely appreciated by patients. It brings the body muscles into play; it relieves that distressing sense of helplessness, which all women feel, by enabling them to help themselves; it shortens labor; and it saves the use of instruments. (Virginia Monthly, February 1875).

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Department of Virginia

Some Observations on Poliomyelitis in Virginia, 1956

As a basis for considering poliomyelitis as it has occurred in Virginia this year, there are presented below three tables for the year 1955 with the corresponding tables through November for 1956.

From these tables it will be seen that there has been more paralytic poliomyelitis reported in the State this year. It will also be noted that there has been a decrease in the incidence of paralytic poliomyelitis among white females and an increase in this form of the disease among the colored population. It is distressing to note that there has been a rise in incidence in the age group 20-39 years.

Table I

Poliomyelitis in Virginia by Age, Sex, and Color, 1955

	All Ages	Under 1	1	2	3	4	5	6	7	8	9	10-14	15-19	20-39	40-59	60+
Total	336	11	13	10	22	22	27	26	18	19	14	65	30	58	1	.....
White Male	184	6	7	3	8	14	13	14	10	14	8	44	16	26	.....	
White Female	126	3	4	6	13	7	11	9	7	4	4	15	11	32	.....	
Colored Male	14	1	1	.....		1	1	1	1	1	2	4	1	.....		
Colored Female	12	1	1	1	1	.....	2	2	.....			2	2	.....		

Poliomyelitis in Virginia by Age, Sex, and Color, Through November, 1956

Total	221	14	19	21	11	9	12	18	8	8	5	37	16	40	2	1
White Male	98	3	9	13	3	2	3	13	6	3	3	19	9	12	.....	
White Female	63	4	5	6	.....	3	2	3	1	2	2	8	5	20	1	1
Colored Male	28	2	4	1	3	1	2	1	1	2	.....	5	2	4	.....	
Colored Female	32	5	1	1	5	3	5	1	.....	1	.....	5	.....	4	1	.....

From these tables we note that the total number of cases of poliomyelitis reported in Virginia in 1956 is lower than the number reported in 1955. There are more cases in the colored population in 1956 with the number of cases in colored females exceeding the number in colored males. Twenty-three per cent of the cases in 1955 were under 5, while 33 per cent were in this group in 1956. In 1955, in the 5-9 group, the per cent was 31, while in 1956 this had dropped to 25 per cent.

The point of interest in these tables is the confirmation that there has been a decrease in the incidence of non-paralytic poliomyelitis in 1956.

It has been known for some years that polio is full of paradoxes. The first and greatest is that the more widespread the infection, the less disease there is. Another paradox is that the better the economic conditions, the more likely it is to find

Table II

Paralytic Poliomyelitis in Virginia by Age, Sex, and Color, 1955

	All Ages	Under 1	1	2	3	4	5	6	7	8	9	10-14	15-19	20-39	40-59	60+
Total	152	8	11	8	12	11	14	11	4	5	5	22	11	29	1	.....
White Male	66	4	5	1	2	5	7	5	2	4	2	11	3	14	1	.....
White Female	70	3	4	6	10	5	5	4	2	1	3	7	5	15	.....	
Colored Male	8	1	1	.....		1	1	1	.....			2	1	.....		
Colored Female	8	.....	1	1	.....		1	1	.....			2	2	.....		

Paralytic Poliomyelitis in Virginia by Age, Sex, and Color, Through November 1956

Total	141	12	17	14	7	5	10	7	2	4	3	18	7	32	2	1
White Male	52	2	7	8	2	.....	3	6	2	.....	1	9	2	10	.....	
White Female	41	3	5	4	.....	2	.....			2	2	2	4	15	1	1
Colored Male	20	2	4	1	1	1	2	.....		1	.....	3	1	4	.....	
Colored Female	28	5	1	1	4	2	5	1	.....	1	.....	4	.....	3	1	.....

TABLE III

NON-PARALYTIC POLIOMYELITIS IN VIRGINIA BY AGE, SEX, AND COLOR, 1955

	All Ages	Under 1	1	2	3	4	5	6	7	8	9	10-14	15-19	20-39	40-59	60+
Total	184	3	2	2	10	11	13	15	14	14	9	43	19	29	..	.....
White Male	118	2	2	2	6	9	6	9	8	10	6	33	13	12	.....	
White Female	56	.....			3	2	6	5	5	3	1	8	6	17	.....	
Colored Male	6	.....							1	1	2	2	.....			
Colored Female	4	1	.....		1	.....	1	1	.....							

NON-PARALYTIC POLIOMYELITIS IN VIRGINIA BY AGE, SEX, AND COLOR, THROUGH NOVEMBER 1956

Total	80	2	2	7	4	4	2	11	6	4	2	19	9	8	.....	
White Male	46	1	2	5	1	2	.....	7	4	3	2	10	7	2	.....	
White Female	22	1	.....	2	.....	1	2	3	1	.....		6	1	5	.....	
Colored Male	8	.....			2	.....		1	1	1	.....	2	1	.....		
Colored Female	4	.....			1	1	.....					1	.....	1	.....	

an increase in susceptibility. With higher wages, better housing, living conditions with less crowding, and improved sanitation, there is less chance for persons to be exposed to the virus in early life and less chance of developing a natural immunity. It might be said, therefore, that in the United States, granting a continuation of high standards prevailing, there will be less and less natural immunity to the disease. This would be an extremely alarming situation if there were no opportunity to protect the population. Fortunately, artificial immunity may be established by administering the Salk Poliomyelitis Vaccine. The proof of the value of this vaccine is developing all over the country and there have been no cases of paralytic poliomyelitis reported in Virginia among those who have received three doses given intramuscularly at the intervals recommended by Dr. Salk.

The most susceptible age group in Virginia was formerly the 5-9 group. The figures this year indicate that this has changed and now the most susceptible group is the Under 1-4. It is likely that this has been brought about by the amount of vaccine that has been given in the older group. The figures in Virginia indicate that persons up to forty years of age, and probably up to fifty years, should be immunized against poliomyelitis. Four of the six deaths that have resulted from infection with the disease this year have been in the group 20-39. Forty-three of the 221 cases have been in the group above 20; thirty-five of these have been paralytic. Of the latter there have been 11 cases of bulbar polio. The time for taking the vaccine is NOW. The third dose will then be due in July, 1957, which will be prior to the time of expected highest incidence during the next polio season. Dr. Salk addressed the annual meeting of the American Public Health Association in November and stated that one fourth of the cases are in adults to age 50 and that if all persons in this group and all children be vaccinated, paralytic poliomyelitis can be practically wiped out in 1957.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Nov. 1956	Nov. 1955	Jan.-Nov. 1956	Jan.-Nov. 1955
Brucellosis	2	1	32	30
Diphtheria	4	7	30	36
Hepatitis (Infectious)	33	42	452	1019
Measles	126	206	23711	4001
Meningococcal Infections	5	11	81	90
Meningitis (Other)	12	....	146	....
Poliomyelitis	17	11	219	325
Rabies in Animals	15	15	277	346
Rocky Mt. Spotted Fever	1	1	52	47
Streptococcal Infections	356	249	5322	6179
Tularemia	1	3	20	15
Typhoid Fever	0	1	56	44

Mental Health . . . .

JOSEPH E. BARRETT, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Training in Child Psychiatry

The practical and theoretical importance of child psychiatry was emphasized by Sigmund Freud's observations that the emotional illnesses of his adult patients were deeply rooted in childhood experiences. The significance of early child-parent relationships has been given continued emphasis by dynamically and analytically oriented schools of psychiatric thought.

The present child guidance movement with the teamwork approach to the study and treatment of children's emotional disturbances was begun by Dr. William Healy in 1909 at the Chicago Juvenile Psychopathic Institute, which is now known as the Institute for Juvenile Research. Originally the team consisted of four members, the child psychiatrist, the pediatrician, the clinical psychologist and the psychiatric social worker. The members of these four professions brought the various contributions of their separate disciplines to bear upon the problems of each child needing help, so that no area of the child's life experiences would be ignored. Subsequently, it has generally been impractical to include a pediatrician as a clinic staff member since so many children are already under the care of private physicians; the physical factors in each case, however, are thoroughly evaluated by consultation with the child's physician.

In 1947, the American Association of Psychiatric Clinics for Children (A.A.P.C.C.) was organized to maintain standards of operation for psychiatric outpatient clinics for children. This is the only organization to set specific national standards for training in child psychiatry, although such training has long been afforded in some of the larger children's psychiatric wards and hospitals. There are approximately one hundred clinics in the United States functioning as active members of A.A.P.C.C. and only forty of these are approved for the training of child psychiatrists. Approval is based upon extensive evaluation by the training committee of A.A.P.C.C. of the clinic's methods of operation, and the professional background of the senior members of each of the three disciplines: child psychiatry, clinical psychology and psychiatric social work.

Fellowships for training in child psychiatry, approved by A.A.P.C.C. are available only to physicians who have completed at least two years of approved general psychiatric residency training. Fellowship training covers a two year period of thoroughly supervised experience in diagnosis and treatment of childhood emotional disturbances. Sometimes one year is spent in each of two different clinics, but shorter periods of training are not considered adequate since the duration of treatment averages from six to eighteen months, and the training experience is most valuable when trainees can participate in the complete treatment process of a large number of cases. During the two year training period, a fellow in child psychiatry will usually carry throughout treatment between twenty-five and fifty cases, seen on a weekly basis or occasionally on a bi-weekly basis. Traditionally the psychiatric social worker does case work with parents, the clinical psychologist administers tests to the child, and the psychiatrist treats the child. In a training clinic the fellow is required to learn about administration of psychological tests and to work with some parents while other staff members see the child, although the majority of his work is with children.

Fellows usually have brief conferences with other staff members involved in each treatment case, after each treatment session; and fellows receive from two to four hours per week of intensive supervision of their treatment sessions by the psychiatric training director. To facilitate such supervision, and as a part of the fellow's learning experience, detailed accounts of all treatment sessions are transcribed into permanent records. There are also regular staff conferences on treatment cases for diagnosis and for evaluation of progress during treatment. During this training period, the fellow is allotted time for reading, attendance at lectures or seminars and, in some cases, attendance at regional or national conferences. Usually there are also regular weekly

Contributed by FREDERIC MACCABE, JR., M.D., *Fellow in Child Psychiatry, Children's Service Center of Charlottesville and Albemarle County, Inc., Charlottesville, Virginia.*

conferences with the chief psychiatric social worker and with the chief clinical psychologist, in order to familiarize the fellow with current advances in these fields.

In addition to the long term treatment cases, most training centers provide some opportunities for a wider experience with children by affiliation with a pediatric or psychiatric hospital in-patient service, a well baby clinic, a juvenile court clinic, a detention home, a day nursery school, or with other types of non-clinical children's services. Most training centers also provide some opportunity for short term diagnostic study where large numbers of children with varying disturbances are more briefly evaluated.

Training stipends, for fellows in child psychiatry, are available from the United States Public Health Service at $3600 to $4000 per year (federal tax exempt) and many states offer similar amounts, or larger stipends carrying an agreement that the fellow will remain in a clinic in that state for a specified period after completing his training. There were in June, 1956, ninety-five fellows currently receiving A.A.P.C.C. approved training. This does not include some trainees who cannot be approved, for instance because of having had their basic medical or psychiatric training in other countries. The majority of trainees are in the larger cities of the north, as smaller clinics can offer training for only one or two individuals at a time. Only six of the forty clinics approved for training are south of the Mason-Dixon Line; these are located in Washington, D.C.; Kansas City, Missouri; Louisville, Kentucky; New Orleans, Louisiana; and two in Virginia: the Memorial Guidance Center of Richmond and the Children's Service Center of Charlottesville. As of June, 1956, the author is the only fellow in an A.A.P.C.C. approved training clinic in Virginia.

This year the council of the American Psychiatric Association recognized the need for specific instruction in child psychiatry to be universally included in general psychiatric residencies, when the Commission on Long Term Policies recommended the appointment of a Standing Committee on Child Psychiatry and Medical Education, to make proposals carrying forward training in child psychiatry as an integrated part of all three-year psychiatric residency programs. Such an orientation in child psychiatry has been part of the residency program at the University of Virginia Hospital since 1948, so that many residents have received first hand experience in child psychiatry at the Children's Service Center for three to six month periods. Such an orientation procedure is not to be confused with the full two year fellowship training which is required for qualification as a child psychiatrist, but is of considerable value in giving the resident first hand experience with the theoretical contributions of child psychiatry to the whole field of psychiatry. It is also valuable in encouraging more psychiatrists to enter the field of child psychiatry when they can see more clearly some of the great satisfactions in treating the younger, more responsive patient, and in working within the teamwork setting of a child guidance clinic. The needs for more psychiatrists to enter the field are superficially indicated by the position vacancy advertisements for persons with adequate training which constantly appear in medical and psychiatric journals. There is increasing appreciation of the fact that one of the most effective ways of meeting our tremendous mental health problem is by early treatment, before the child becomes fixed in the patterns of emotional illness, and while the parents can still work out constructively their conflicts, fears and doubts about parenthood.

Most Medical Students

Forty per cent of all first-year students in the nation's 76 approved four-year medical schools come from six states: New York, Pennsylvania, California, Ohio, Illinois and Texas.

A recent report by the American Medical Association shows that the first-year enrollment of all the approved medical schools in these states during the 1955-56 academic year represented 42 per cent of the total enrollment for the nation. Almost 38 per cent of all U.S. medical schools are located in these same six states.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Why Not A Deductible?

"Why not change the contract so that a Blue Cross-Blue Shield subscriber personally has to pay the first $25.00 or $50.00 of his hospital bill?" The physicians who ask this question are thinking of the deterrent effect a "deductible" would have upon utilization of prepaid services; they are suggesting a built-in control over a situation that worries them.

Physicians have good reason to be worried about the situation. A large segment of the population is becoming conditioned to the attitude that occupancy of a hospital bed is the first step toward care not only of major, but also of minor illnesses; that admission is prerequisite to establishment of a diagnosis; that entering a hospital is an indirect means of paying for medical care; and that a hospital stay can be had simply for the convenience of the patient, the patient's family, or the doctor. Since a hospital bed costs about $20,000 to construct and about $6,000 a year to maintain, this attitude is bringing about the kind of obvious extravagance that invites governmental control. There is now a fairly long-standing tradition in the United States of having the federal government step in and control private enterprise "for the public good"—from the Interstate Commerce Act of '87 through the little pigicides of the '30s. . . .

True enough, "deductibles" would exert a deterrent effect upon wasteful usage of expensive in-patient facilities and personnel. But would people subscribe to a service contract that provides for a personal out-of-pocket expenditure? Not if "first-dollar" insurance indemnification is also available to them. Blue Cross-Blue Shield rates could not be reduced enough to offset the competitive advantage that "first-dollar" indemnity policies would have over deductible-type contracts.

Most people really want to prepay *in full*. Their "easy monthly payments" toward their homes, cars, furniture, and appliances leave them little or no income to cover unexpected liabilities. Though the need to pay a "deductible" may be known in advance, necessity of hospital admission usually comes as an unpleasant surprise—at a time when the amount of the "deductible" is not on hand. Folks living to the hilt of our credit-economy are very much upset, emotionally as well as financially, by surprise; to avoid them they want to prepay in full. A "deductible" would be hard to sell in today's competitive market.

It has been conservatively estimated that 200,000 Blue Cross-Blue Shield subscribers here in Virginia are having difficulty making ends meet.[1] In their cases a "deductible" might cause medically unsound postponement of hospital care. Or it might cause collection problems and bad debts for the hospitals, thereby invalidating one of the reasons hospitals have been "underwriting" the Blue Cross program. A Blue Cross Plan not only must assure the degree of use of hospital facilities needed by the public, it must also maintain a system of adequate hospital financing. Accordingly, Blue Cross' prepayment program is not like automobile insurance. A dented fender does not have to be repaired right away; a broken leg must.

If the average utilization experience of all Blue Cross-Blue Shield Plans across the country can be considered a criterion of proper or optimum utilization, it follows that the Virginia Plans are spending about 12% of their aggregate income for above-optimum, probably unnecessary, in-patient services. In dollars and cents this percentage means a lot, because it is applicable to $17,000,000. When translated into terms of patient-admissions, however, the 12% indicates that only one person in eight is misusing his prepaid services. Should the Plans make their contracts less attractive and less valuable to seven persons (and to doctors and hospitals, too) in order to keep the eighth person in line? Or should the Doctor-Hospital-Plan "team" keep trying to work out some other, better solution to the problem that the eighth person is causing?

In this regard, the Medicare Program for Servicemen's dependents will soon give the hospitals some experience with a "deductible" payable by folks of low to moderate income. With actual experience behind them, the hospitals will, of course, be in a better position to determine the practicality of including a "deductible" as a feature of their Blue

1. Prepaid Medical Care—Virginia Medical Monthly, December, 1956.

Cross service contracts, perhaps on an optional if not on a mandatory basis.

But during our current credit-economy, when next month's pay-check is spent before received, perhaps it is best that the Plans continue to make available, to those people who want it, the opportunity to prepay in full for as many health-care expenses as possible, so that their financial arrangements will not be disrupted by the additional, unexpected liability of sickness-expense. A "deductible", inherent in which is the possibility that the hospital rather than the patient becomes the co-insurer, undoubtedly will create frustrations that patients will project onto the hospitals—often onto their physicians, too. Inadequate levels of protection, or gaps in protection, are the main cause of hostility towards hospitals, doctors, and the voluntary medical-care system we are trying to perpetuate.

Clearer understanding of what prepayment means is needed. The people's attitude must be one of buying protection, not that of prepaying for care that will be used with certainty. Too often subscribers and insureds feel that if they don't go to the hospital, they are cheated. But if they can be made to realize that prepayment is a community method for financing the health services they will some day need, is a voluntary levy accepted by their neighbors as well as themselves, their improper attitude toward the use of prepayment funds should change. In this regard, every doctor can help.

Uniform Chemical Labeling

The American Medical Association's Board of Trustees has authorized a first step toward protecting the public from potentially dangerous household and commercial chemicals.

The Board authorized the A.M.A. committee on toxicology to draft a recommended "model" law on labeling of many possibly harmful chemicals not now regulated. It would serve as a guide for writing regulations which would require labels to show such information as the product's contents, its possible dangers, directions for safe use, and first aid instruction.

Products involved include auto care and repair materials, paints and paint removers, putty, soldering fluids, household cleansers and polishers, heating and cooking fuels, laundering items, art supplies, and toys containing chemicals.

The committee's secretary, Bernard E. Conley, estimates there are at least a quarter of a million different trade-name substances now on the market. Without proper labeling, physicians and the public cannot possibly know what harmful material they may contain or how to treat poisoning from them.

The proposed law is intended to reduce careless and ignorant handling and storage of chemicals in the home, in small businesses and in other areas where control of exposure to the chemicals is not as efficient as it is in the manufacturing process, Conley said.

The law should be an "enabling act" under which later regulations could spell out necessary details for enforcement and compliance, according to Dr. Torald Sollmann, Cleveland, committee chairman. The legislation should be flexible and not readily out of date.

The A.M.A. committee plans to consult other organizations and individuals who are interested in the problem. These include the American Academy of Pediatrics, American Public Health Association, American Pharmaceutical Association, National Safety Council, leading trade associations, and various state and national government regulatory agencies.

Woman's Auxiliary . . .

President ..... Mrs. Lee S. Liggan, Irvington
President-Elect ..... Mrs. John R. St. George, Portsmouth
Vice-Presidents ..... Mrs. Maurice Bray, Suffolk
Mrs. J. Rollins McGriff, McLean
Mrs. H. H. Howze, Norton
Recording Secretary ..... Mrs. James R. Grinels, Richmond
Corresponding Secretary
Mrs. A. B. Gravatt, Jr., Kilmarnock
Treasurer ..... Mrs. Robert H. Detwiler, Arlington
Publication Chairman ..... Mrs. Paul Pearson, Warsaw

A Message from the President.

Greetings and best wishes for a Happy Holiday Season.

In just a few weeks we shall enter another year, and I am wishing for each of you health and happiness.

As Auxiliary members, let us think seriously of our opportunity for service and may each of us resolve to give to our work our best endeavor. It is an honor and a privilege to be a member of an auxiliary to a medical society. We are bound by very dear ties to the members of that great profession so truly described as "The guardian of birth, healer of the sick and comforter of the aged."

Our National Auxiliary's primary project is Health Education, and the theme for this year is "Health Is Our Greatest Heritage". I am asking each country auxiliary to increase its support of our national projects—each one is worthy of our sincere consideration.

In Virginia we have two additional projects—The Leigh-Hodges-Wright Memorial Fund, which is now being used by two doctors; and our Philanthropic Fund, which is divided between Sheltering Arms Hospital and the Crippled Children's Hospital.

May we give our very best to each objective, and, by working together, make this a year of splendid achievement in Auxiliary work.

Alice H. Liggan
(Mrs. Lee S. Liggan)
President

Richmond.

The Auxiliary to the Richmond Academy of Medicine met November 16th in the Branch House for lunch. The president, Mrs. Carl N. Meador, presided at the business meeting. An announcement was made concerning the philanthropic project—the sponsoring of a play. Mrs. Fred Dixon reviewed "Papa's Wife" by Bjorn.

Petersburg.

This Auxiliary met on November 27th. Plans were made for sponsoring a dance for student nurses of the Petersburg General Hospital on December 15th. This dance was financed by the local doctors with Mrs. William Grossmann as chairman of arrangements. The group also voted to make a donation toward the purchase of a wheel chair for a mentally retarded child in the public schools. These children are entertained by this Auxiliary on various holidays, such as Halloween, Valentine's Day, and Easter.

Southwestern Virginia.

This Auxiliary held its fall meeting on November 8th in Pulaski. During the business session, officers for the coming year were elected as follows: President, Mrs. Randolph Chitwood, Wytheville; president-elect, Mrs. E. L. Bagby, Pearisburg; vice-president, Mrs. Carey Stone, Radford; secretary, Mrs. Ross Campbell, Saltville; treasurer, Mrs. J. A. Soyars, Saltville; and corresponding secretary, Mrs. P. C. Hendrix, Wytheville.

Following the business session, a tea was held at the home of Mrs. James L. Chitwood. Later the members joined their husbands for a social hour and dinner at the Inn.

Mrs. M. C. Newton, Jr.,
Publicity Chairman

A Reminder.

Please, all Publicity Chairmen of local auxiliaries, let me have the "highlights" and other information of interest immediately following your meetings. This can best be accomplished by sending these items just as you wish them to appear on the Monthly page, which our doctors have so generously allocated to our work. Kindly participate that our auxiliary will truly represent us and have its deserved recognition.

A most Healthful and Peaceful New Year.

Virginia Drewry McG. Pearson
(Mrs. Paul Pearson)
Publications Chairman

Editorial....

Public Law 569 (Continued)

PUBLIC LAW 569 was passed on June 7, 1956, by the 84th Congress to provide civilian medical care for service personnel dependents who are not receiving medical services deemed adequate at the present time. The authorities in Washington estimate that about 800,000 persons or 40% of all dependents fall into this category.

Aside from the obligation the government has traditionally assumed for providing medical care for all dependents of the armed services, several practical considerations entered into the decision to utilize civilian as well as military medical personnel and facilities to provide this overall coverage. The army blames inadequate dependent care for lowered morale, reduced career attractiveness, financial hardship, loss of career personnel and a turn-over in the armed services of one-third annually.

The medical care authorized for dependents in military facilities is limited to diagnosis, acute medical conditions including acute exacerbations or acute complications of chronic diseases, surgical conditions, contagious diseases, immunization, obstetrical and infant care. Limited dental care also is provided. Special nurses may be furnished under specific conditions. The services authorized for dependents in civilian facilities are somewhat less broad and limited to spouse and children.

Hospitalization, when indicated, is provided in military facilities at a cost of $1.75 per day. The dependent, when hospitalized in a civilian hospital, will be charged $25.00 or $1.75 per day depending upon which sum is the larger. Free choice of physicians was specified in the bill at the insistence of the surgeon general of the uniformed services involved.

Blue Cross will serve as the fiscal agent for hospitalization on the East and West Coasts while commercial companies have been designated for this service in the Central Area. Twenty-nine state medical organizations, including The Medical Society of Virginia, have signed contracts, as of November 26, for payment of professional fees Contracts had not been reached with four state societies which had demanded what were considered by the government to be excessive fee schedules. The Blue Shield has been designated the fiscal agent for payment of professional fees in Virginia This contract with the Blue Shield is subject to review by The Medical Society of Virginia annually.

The fee schedule generally has been based on what would be an average charge for a family in the $4500-$5000 income bracket.

Critics of Public Law 569 charge that this bill is the entering wedge of socialized medicine. This may be true but there does not appear to be anything we can do to prevent it. The law was enacted before most of us knew it was pending. The announced reasons behind it are understandable and in the main commendable. It will be our responsibility to see that it is not abused and to make every effort to prevent any increase in its scope.

H.J.W.

Society Proceedings . . . .

The Southwestern Virginia Medical Society

Held its annual fall meeting in Pulaski on November 8th. The following scientific program was presented: Pediatric Fluid Problems with Dr. Walter E. Bundy, Jr., Assistant Professor of Pediatrics, Medical College of Virginia, as chairman; Fluid Control in Childhood Diabetes by Dr. Glenn C. Hall, Radford; Control of Vomiting and Diarrhea in the Office and Home by Dr. Harrison C. Spencer, Abingdon; Fluid Problem in a Non-Teaching Hospital by Dr. T. J. Humphries, Roanoke; and Fluid Problems in a Teaching Hospital by Dr. Bundy.

Officers were elected as follows: President, Dr. J. T. Showalter, Christiansburg; vice-president, Dr. Reverdy H. Jones, Jr., Roanoke; and secretary-treasurer, Dr. William S. Credle, Bristol.

A banquet was held in the evening at which the guest speaker, Dr. Fletcher D. Woodward, Professor Emeritus of Otolaryngology, University of Virginia, presented an address on The Medical Aspects of Automobile Crash Injuries.

Tri-County Medical Society.

The regular meeting of this Society was held November 27th at the Town Hall in Franklin. There were twenty-seven members present.

The following scientific program was presented: Medical Aspects of Rheumative Fever and Rheumatic Heart Disease by Dr. Paul D. Camp; Medical Aspects of Congenital Heart Lesions by Dr. W. T. Tucker; and Variable Cardiac and Vascular Lesions Amenable to Surgery by Dr. T. N. P. Johns. All speakers are from Richmond.

Williamsburg-James City County Medical Society.

At the meeting of this Society on November 14th, Dr. Richard H. Kirkland, Medical College of Virginia, spoke on Radioactive Iodine in the Treatment of Heart Disease.

Warwick-Newport News Society.

The regular meeting of this Society was held on November 13th in the Coca-Cola Building. The speaker was Miss Libby Radus, speech therapist and director of the Hampton Roads Speech Correction Center, who gave an illustrated talk on "These Untrained Tongues".

The following officers for the coming year were elected: President, Dr. F. S. Beazlie; vice-president, Dr. I. F. Nesbitt; and secretary-treasurer, Dr. S. H. Mirmelstein.

Hampton Roads Orthopedic Society.

The fall meeting of this Society was held on October 8th. Dr. George Duncan, Norfolk, was elected president and Dr. Arthur A. Kirk, Portsmouth, secretary.

Dr. Gervis Taylor presented the follow-up on an interesting case of a dislocated knee and also a case of a dislocation of the foot. Dr. George Hollins presented a follow-up on a fracture of the tibia which occurred in an infant with a club foot. He also presented two cases of osteochondritis of the elbow and another case of bi-lateral dislocation of the patella. Dr. George Duncan presented a case of eosinophilic granuloma on the 4th dorsal vertebra with compression of the spinal cord. Dr. Stevenson presented a case of fracture of the femoral neck and femoral shaft for which separate fixations were done. He also displayed samples of freeze dried bone and their use was discussed.

Southern Medical Association.

At the Golden Anniversary meeting of this Assotion, held in Washington, November 12-15, Dr. W. Raymond McKenzie, Baltimore, succeeded to the presidency, and the following officers were elected: president-elect, Dr. J. P. Culpeper, Jr., Hattiesburg, Miss.; vice-presidents, Dr. W. Kelly West, Oklahoma City, Okla., and Dr. Denton Kerr, Houston, Texas; executive secretary-treasurer, V. O. Foster, Birmingham; advisor and professional relations counselor, C. P. Loranz, Birmingham; and business manager, Robert F. Butts, Birmingham. Dr. R. H. Kampmeier, Nashville, was named Editor of the Journal. Dr. Donald S. Daniel, Richmond is Councilor from Virginia.

The 1957 meeting of the Association will be held November 11-14 at Miami Beach.

News....

Calendar of Coming Events

Virginia Council on Health and Medical Care—Annual Meeting—The Empire Room, Hotel Jefferson, Richmond—10:00 A.M.—January 7.

International College of Surgeons—Mid-Atlantic Regional Meeting—Greenbrier Hotel, White Sulphur Springs, West Virginia—February 10-13.

American Academy of General Practice—1957 Annual Scientific Assembly—Kiel Auditorium, St. Louis, Missouri—March 25-28.

National Society for the Prevention of Blindness—Annual Conference—Hotel Statler, New York City, N. Y.—April 7-10.

American College of Physicians—38th Annual Session—Boston, Massachusetts—April 8-12.

American Trudeau Society—52nd Annual Meeting—Kansas City, Missouri—May 6-9.

Virginia Academy of General Practice—7th Annual Scientific Assembly—Hotel Roanoke, Roanoke—May 24-26.

The Medical Society of Virginia—Annual Meeting—Hotel Shoreham, Washington, D C.—October 27-30.

New Members.

Since the list published in the December issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Solomon Naphtali Albert, M.D., Arlington
Robert Humphreys Gruver, M.D., Arlington
Kenneth Stebbins Helenbolt, M.D., Norfolk
William Harvey Huffstetler, Jr., M.D., Newport News
Thomas Stacy Lloyd, Jr., M.D., Fredericksburg
John Gordon Morrow, Jr., M.D., Charlottesville
Walter Shirley Nicklin, Jr., M.D., Warrenton
William John Perry, M.D., Alexandria
Lonis L. Shurter, M.D., Galax
George John Vareska, M.D., Norfolk

Richmond Memorial Hospital Appointments.

In addition to the appointments listed in the December issue of the Monthly, the following have also been named: Chief of Medicine, Dr. Wyndham B. Blanton; Internal Medicine, Dr. Charles M. Caravati, chief; Dr. Arthur Klein, vice-chief; and Dr. Adney K. Sutphin, secretary; General Practice, Dr. E. E. Haddock, chief; Obstetrics and Gynecology, Dr. Eric Schelin, chief; Roentgenology, Dr. Donald P. King, chief; and Pathology, Dr. Willis M. Monroe, chief.

Dr. Henry W. Decker will be Chief of Staff, with Dr. Arthur Brinkley as assistant and Dr. Sidney Grey Page, Jr., secretary.

Dr. Charles W. Whitmore,

Lynchburg dermatologist, has been admitted to the Lynchburg Bar Association. He is one of few physicians who also holds law degrees.

Dr. Arthur J. Mourot,

Alexandria, has been elected president of the Historic Alexandria Foundation.

Richmond Doctors Honored.

Three Richmond doctors have been elected members of the British Royal Society of Health. They are Dr. Charles L. Outland, health director of Richmond Public Schools; Dr. Edward M. Holmes, Jr., city health director; and Dr. Richard J. Ackart, executive director of the Virginia Hospital Administration.

Portrait Unveiled.

An oil portrait of Dr. David Christian, III, heroic young Appomattox physician, who was killed as he attempted to go to the aid of another shooting victim, was unveiled at the Appomattox Court House on November 23rd. His portrait is the third generation of the Christian family whose portraits hang in the building. His father, Dr. David Christian, II, and his grandfather Judge D. A. Christian are the others.

Dr. Samuel Love,

Danville, has been awarded a five-year fellowship worth more than $50,000. He is instructor in microbiology at the Bowman Gray School of Medicine. The fellowship is designed to strengthen the basic science areas of medical education through research. Dr. Love's project includes the study of living cells in which evidence is being collected of the progress of medical research from the body as a whole, to organs and finally to cells themselves.

Dr. Ralph G. Beachley,

Arlington, has been elected to Ordinary Membership in the British Royal Society of Health. This is the highest grade of elective membership.

Dr. Marion L. Rice, Jr.,

Has been appointed to the part-time position of medical examiner in the Richmond City Employees' Medical Service. He has recently been with the Veterans Administration Hospital at Kecoughtan.

McGuire Lectures Series.

The Annual McGuire Lecture Series of the Medical College of Virginia will be held January 23-25. A complete program of this lecture series and the Symposium on Cardiology and Cardiac Surgery was published in the November issue of the Monthly.

Dr. R. K. Butler,

Recently of Front Royal, is now Director of the Haywood County Health Department, Waynesville, N. C.

Dr. Mayes Honored.

Dr. D. C. Mayes, general practitioner and civic leader in Dinwiddie for fifty years, was honored recently at a surprise testimonial dinner by the Wilson-Hebron-Ford Ruritan Club. He received a plaque in commemoration of his services.

Dr. B. H. Martin, Jr.,

Has completed a two and a half year residency in Ophthalmology at the Episcopal Eye and Ear Hospital in Washington, D. C., and has resumed his practice in Richmond.

Clinico-Pathological Conferences.

The Department of Health, Education and Welfare of the Public Health Services, is instituting a policy of occasionally holding their regular staff Clinico-Pathological Conferences in the evening. The first such evening conference will be held in the Clinical Center Auditorium of the National Institutes of Health, Bethesda, Md., February 7th, at 8:30 P. M. Guest discussants are Dr. Charles Ragan, Associate Professor of Clinical Medicine, College of Physicians and Surgeons, Columbia University, widely recognized as an authority on rheumatoid arthritis, and Dr. Frederick G. Germuth, Association Professor of Pathology, Johns Hopkins University.

Interested physicians are cordially invited to attend.

Dr. William R. Jordan,

Richmond, has been reappointed Governor for the State of Virginia for the American Diabetes Association.

Dr. A. M. Tiernan

Has completed a two year residency in Ophthalmology at the University of Louisville General Hospital and is now practicing at Ward's Corner in Norfolk. He formerly practiced at Richlands prior to specializing.

Dr. Granville L. Jones,

Superintendent of Eastern State Hospital since 1946, has resigned to accept the superintendency of the Arkansas State Hospital in Little Rock.

National Medical Foundation for Eye Care.

Announcement of the establishment of this Foundation was made November 15th. This is a nonprofit scientific and educational institution, incorporated in New Jersey, and has been organized by ophthalmologists of the country to provide American ophthalmology with an agency to present to the public generally and to fellow physicians pertinent information on the care and treatment of the eyes.

Dr. Ralph O. Rychener, Memphis, is president of the Foundation, and Dr. Charles E. Jaeckle, East Orange, N. J., secretary-treasurer.

The Foundation is now enrolling its charter membership and all ophthalmologists and other physicians interested in eye care are invited to become charter members. Applications are available through Dr. Jaeckle at 136 Evergreen Place, East Orange, N. J.

International College of Surgeons.

The Mid-Atlantic Section of the College will be held February 10-13, at the Greenbrier Hotel, White Sulphur Springs, West Virginia. The medical profession is cordially invited to attend.

Virginia Association of Medical Assistants.

On October 25th, Mrs. W. C. Dover, President of the Association, who is employed in Dr. W. Clyde

Adkerson's office, Lynchburg, and Mrs. E. S. Carwile, President of the Medical Office Personnel Association of the Lynchburg Chapter, employed in the office of Dr. John Wyatt Davis, Jr., attended the first annual meeting of the American Association of Medical Assistants in Milwaukee, Wisconsin.

Office Available.

Newly completed, air conditioned medical building. Space available for one selected specialist. Two miles from the Pentagon, 3213 Columbia Pike, Arlington. Phone Jackson 80749 or Jackson 65066. (*Adv.*)

Obituaries . . . .

Dr. William Royall Warriner,

Prominent Crewe physician, died November 6th. He was seventy-two years of age and a graduate of the Medical College of Virginia in 1909. Dr. Warriner had practiced in Crewe since that time and took over his father's practice. He was also surgeon for the Norfolk and Western Railway Company. Dr. Warriner had been a member of The Medical Society of Virginia since 1909. His wife, a son and a daughter survive him.

Dr. Henry Arthur Bonynge,

Retired surgeon of Gordonsville, died December 10th, at the age of seventy-three. He was a graduate of Columbia University College of Physicians and Surgeons in 1905. Dr. Bonynge practiced in Ridgewood, N. J., for thirty-seven years before moving to Gordonsville. He was a member of the visiting staff of Paterson, N. J., General Hospital and was company physician for the Erie Railroad. Dr. Bonynge was secretary-treasurer of the Eastern Saddle Horse Breeders Association for a number of years, a director of the Virginia Thoroughbred Association and a member of the North American Horse Show Association. He had been a member of The Medical Society of Virginia for ten years.

His wife and a daughter survive him.

Dr. Noland

Dr. Stacy Tracy Noland passed away on Tuesday, July 17, 1956. With his passing, Arlington County lost one of its most beloved general practitioners, and the Arlington County Medical Society lost one of its pillars of strength.

Dr. Noland was born on May 30, 1890, in Loudoun County, Virginia. He graduated from the College of Physicians and Surgeons of Baltimore in June, 1914. He interned at Mercy Hospital, Baltimore, Maryland, from 1914 to 1915.

During World War I, Dr. Noland answered the call of his country and served with distinction with the American Expeditionary Force in France. Following the service, he returned to Arlington County, which at that time was primarily a rural area with only three or four practicing physicians.

His professional career was marked by his devotion to his patients regardless of financial or social standing. He was a man who never permitted anything to stand in the way of proper service to his patient. He never turned down a call no matter the hour of the day or night. To all, he gave of his knowledge and his warm understanding—understanding that comes with the years of watching human suffering.

Dr. Noland was one of the physicians who laid the foundation to our present Medical Society. In the early years of the Medical Society, he served as president, following which he served in practically every office in the Medical Society, including chairmanships of nearly all of the committees.

In a similar manner, Dr. Noland greatly contributed to the establishment of our present Arlington Hospital. During the period in the mid forties when there was a lack of intern personnel, he gladly and generously gave of his time so that the needs of the patients within the hospital could be met. Frequently, he spent night after night in the hospital when no intern or resident was available. He was a member of the Governing Staff, serving as Vice President in 1945.

During World War II, he cheerfully contributed his time as a member of one of the draft boards of the county. During this period over 9,000 men were examined in Arlington.

Not the least of his contributions was the effect of his wonderful personality on his friends and associates. He was a Southern gentleman blessed with a golden heart, congenial disposition, and a ready wit. His friends throughout the society and elsewhere were legion. He was always interested in the young physicians and their welfare and progress. His desire to guide these young physicians has been one of the things that has made our society what it is today.

Trerefore, Be It Resolved that this resolution be included in the minutes of this meeting and a copy sent to his family.

J. Raymond B. Hutchinson, M.D., *Chairman*
H. Clark Bates, Jr., M.D.
Charles K. Latven, M.D.

Dr. Warinner

It is with regret that we record the death of Dr. Junius Ernest Warinner, Jr. at his home in Richmond, September 4, 1956.

Dr. Warinner, the son of Dr. Junius Ernest Warinner, Sr. and Pauline Storrs, was born November 17, 1892 at "Montrose", an old pre-civil war home, just north of Pine Camp Hospital. As a small boy, his family moved to "Hunslet Hall" near Ellerson, Va., living there until he completed his education.

His early schooling began in the little family schoolhouse at their home and continued at Highland Park Public School. He then attended the Richmond Academy for Boys. On completion of his pre-medical education at the University of Richmond in 1912, he attended Johns Hopkins School of Medicine, with graduation in June, 1916, and subsequent internship in Baltimore, Maryland at the Church Home and Infirmary. He was a member of Pi Mu and Kappa Alpha fraternities. On May 19, 1917, Dr. Warinner received his commission as a First Lieutenant in the Army Medical Corps and began his tour of active duty with the McGuire Unit, which later became Base Hospital 45. He was later transferred to another unit Base Hospital 67 and served with this unit in France for 18 months.

After being discharged from the Army, he practiced general medicine with his father at "Hunslet Hall". Very shortly thereafter, he married Miss Helen Starke on September 15, 1920 and moved his office and home to 3609 Brook Road, which was known as Ginter Park Township at that time, and continued in general practice at this location for 36 years.

Dr. Warinner was an active and devoted member of the Caduceus Club. He presented many scientific papers to this group and was elected to every office in this organization. He was a member of the Richmond Academy of Medicine, Medical Society of Virginia, Southern Medical Association and the American Medical Association. Dr. Warriner was on the staff of Grace Hospital; Retreat for the Sick; St. Luke's; Stuart Circle; St. Elizabeth's and Sheltering Arms Hospital. He was also a member of the Board of Directors at Grace Hospital and had recently been appointed a member of the Executive Committee of the Medical Staff at the new Richmond Memorial Hospital. At one time he was on the teaching staff at the Medical College of Virginia, where he taught an almost forgotten art, Bedside Manner. He was on the Board of Directors of the Richmond Home for Boys for 17 years. He was a member of the Lewis Ginter Lodge No. 317 A.F. and A.M.; a Knight Templer of Washington Royal Chapter No. 9 and a Shriner belonging to Acca Temple. He was also a member of the Richmond Chamber of Commerce.

Dr. Warinner was deeply interested in religious activities and served as deacon in the Mizpah Presbyterian Church for approximately 40 years. He was a lover of horses from childhood and never missed an opportunity to ride or attend a horse show or race. In more recent years, he spent many week ends at his cottage "Little Hunslet" on Urbanna Creek, where he thoroughly enjoyed "just relaxing" and sailing.

In writing this resolution it is our first thought to pay tribute to the memory of this distinguished physician, loyal friend and Christian gentleman, who, in many ways, was comparable to the country doctor. Upon his broad shoulders he carried the burdens of his many devoted patients with cheerful understanding. As a true humanitarian, his theme of life was not how much he could obtain, but how much he could give to his patients and fellow men. Ernest Warinner was completely dedicated to his profession and his associates. We who are left behind find stirred up within us, the deep conviction that rises in the human heart in times of parting, that this life is not all. In the words of St. Paul, "Eye hath not seen, nor ear heard, neither have entered into the heart of man, the things which God hath prepared for them that love Him."

Therefore, Be It Resolved, by the Richmond Academy of Medicine, that we express our sincere and heartfelt sympathy to the bereaved family of our departed friend and colleague, to whom this memorial shall be sent, a copy to be made a part of the permanent records of this Academy and a copy submitted to The Medical Society of Virginia.

E. Latane Flanagan
William H. Higgins, Jr.
William R. Hill
Gordon D. Hall, *Chairman*

Kinsley McWhorter, Jr.

Whereas, God in His infinite wisdom has removed from our midst our friend Kinsley McWhorter, Jr., able reporter and editor, Christian Gentleman, and friend of the medical profession, and

Whereas, the members of the Roanoke Academy of Medicine appreciate the understanding, friendliness, and honesty of his articles dealing with medical subjects, some of which have received statewide and nationwide recognition, and,

Whereas, these writings have brought about a better understanding between physicians and the press, and physicians and the public, and,

Whereas, many members of the Roanoke Academy of Medicine knew Kinsley McWhorter, Jr., not only as an able reporter but also as a personal friend,

Be It Therefore Resolved, that the members of the Roanoke Academy of Medicine mourn his untimely passing and extend deepest sympathy to widow, his children and the other members of his family, and be it further resolved, that this resolution be sent to Mrs. Lora McWhorter, a copy placed in the minutes of the Roanoke Academy of Medicine, and copies be sent to the Virginia Medical Monthly and to the Roanoke World-News.

Frank A. Farmer, M.D., *Chairman*

Current Currents

ROANOKE will be the scene of the first 1957 "Nomenclature" Institute to be sponsored by the American Medical Association. The Institute will be held on March 11-13 and is presented as a special service to medical record librarians and others using the Nomenclature in hospitals, doctor's offices and medical clinics.

Lectures are given by Adaline C. Hayden, C.R.L., Associate Editor, on the theory, construction, basic principles, special and specific problems, and installation of the system. Anatomy lectures are given by Dr. Edward T. Thompson, M.D., Editor of the *Nomenclature* and Coordinator of Professional Services, hospital facilities, U.S. Public Health Service, Washington, D. C.

Registration for each session is limited to the first 100 applicants and is not restricted to registered medical record librarians. Anyone contemplating the installation of the system or already using it and employed as a clinic clerk, doctor's secretary or receptionist, nurse or physician may attend. Tuition is free. Applications should be sent to Mrs. Hayden at AMA Headquarters, Chicago.

SELECTIVE SERVICE plans to call 450 physicians in February, 250 of them for the Army and 200 for the Air Force. This is the largest single call since the Army, Navy and Air Force took 1,275 men in March, 1955. In announcing the call, Selective Service directed local boards to comb their files and make sure that younger priority III physicians in residency training are really essential to the operation of hospitals. Some of these, according to Selective Service, are not essential but are so classified.

It is hoped that a sufficient number of younger men will be reclassified into class I-A and prevent the necessity of calling some men in the upper age bracket. By younger men, Selective Service means those under 37 years.

Since the program went into effect in 1950, the special draft has brought 10,337 physicians into the services. The Act is scheduled to expire July 1, and the Defense Department has indicated it will not ask for another extension.

OVERALL MEDICAL CARE COSTS for U.S. families increased 1.5 per cent during the third quarter of 1956, according to a U.S. Bureau of Labor Statistics study. However, fees charged by physicians during the three month period ending in September increased only 0.8 per cent. Important factors in the rise in medical care costs were a 3.2 per cent increase in hospital rates and a 3.9 per cent rise in Blue Cross fees.

THE MEDICAL CARE PROGRAM for Service Dependents went into effect on December 7 and all members of The Medical Society of Virginia have been sent a phy-

sicians' guide, fee schedule, claim forms, etc., by the fiscal agent. However, a number of questions have been raised concerning the program and several of those most often asked are covered below:

Identification—Military dependents may submit as identification their post exchange card, the combined post exchange-commissary-military medical care card, or the standard military dependent identification card. After next July 1 the only identification honored will be a special Defense Department medicare card.

Payment for drugs—ODMC says there are no plans for authorizing payment for drugs, medicinals or other medical supplies, except those furnished while hospitalized or those administered directly by a physician.

In a letter to state medical societies and their fiscal agents, Maj. Gen. Paul I. Robinson, Executive Director of ODMC, stressed the following:

1. It is intended that civilian medical care under the program will be comparable to that provided in armed services facilities. Physicians participating will receive payment in full from the government in accordance with the published schedule of allowances or under a special report. In most instances this means that the doctor will receive payment for his usual charge or the amount set in the schedule, whichever is less.

2. In instances in which the physician believes that an allowance greater than that prescribed in the local schedule is justified, he should look to the government rather than the patient for payment. Provision is made for the doctor to submit a special report to his state medical society and in turn to the government as a request for additional payment. Such payment will be made upon approval by the society's review board and the government contracting officer.

THE DRAMA OF MODERN SURGERY will be highlighted in a new series of radio transcriptions which the AMA currently is preparing for use over local stations. The public will be able to hear on-the-spot descriptions of actual surgical procedures performed by eminent surgeons in 13 different areas, such as abdominal, brain or chest surgery. While performing a regular operation, the surgeon will comment on his movements in terms the average person will understand. Afterwards, the doctor will be interviewed on new developments in his special field.

The 13 program series will be available for placement on radio stations by local medical societies about March 1.

THE U.S. PUBLIC HEALTH SERVICE estimates that births in the United States this year will total 4,202,000—a new record. That would be 111,000 more than the estimated births in 1955.

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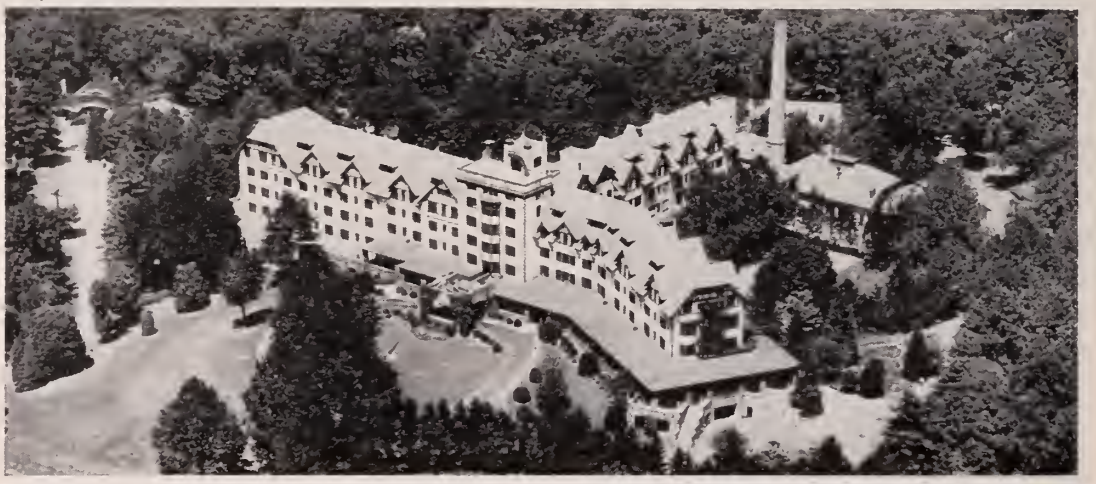


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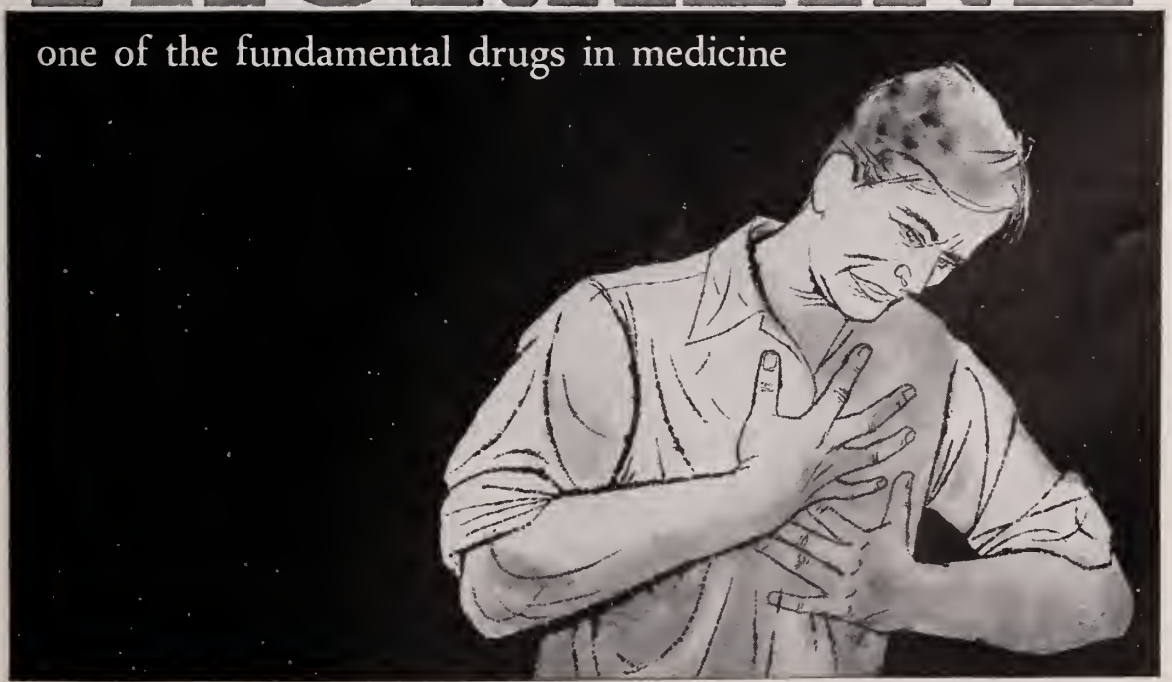
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1. Ende, M.: Am. Pract. & Dig. Treat. 6:710 (May) 1955.

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Vitamin B_{12}	25 mcgm.
Thiamine (B_1)	10 mg.
Pyridoxine (B_6)	5 mg.

(INCREMIN Drops contain 1% alcohol)

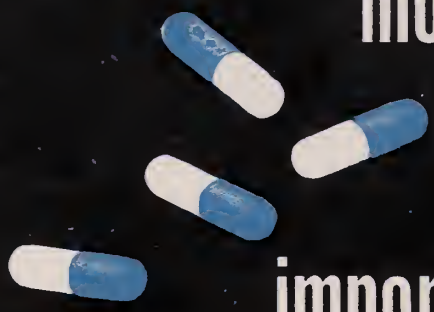
Remember INCREMIN DROPS. Same formula. Cherry flavor. Can be mixed with milk, milk formula, or other liquid. In 15 cc. polyethylene dropper bottle. *Dosage:* 0.5 to 1 cc. (10-20 drops) daily.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, N. Y.

*Reg. U. S. Pat. Off.

ANNOUNCING

'CATH



more effective

in clinicall

important infectio

than any other

antibiotic

OR MOST INFECTIONS

CILLIN

NEW

(NOVOBIOCIN-PENICILLIN G, MERCK)

THE ANTIBIOTIC PRODUCT OST LIKELY TO BE EFFECTIVE

MPARE THESE ADVANTAGES:

Proved effectiveness in the largest num- of clinically important infections in- ding those caused by antibiotic-resistant *phylococci* and proteus.

Therapeutic, *bactericidal* blood levels are mptly achieved.

Exceptionally well tolerated; patient sen- vity reactions are rare at recommended age.

No yeast or fungal super-infections nor antibiotic-induced enteritis, vaginitis or stitis have been reported following THOCILLIN.

No problems of cross-resistance have been ountered with CATHOCILLIN.

The normal intestinal flora is not dis- bed by CATHOCILLIN.

AGE: *for adults—two capsules q.i.d.; for children r 100 lbs.—dosage in proportion to weight (e.g. one ule q.i.d. for a child weighing 50 lbs.).*

CONSIDER CATHOCILLIN FIRST

—for these clinically important infections: tonsillitis; pharyngitis; pneumonia; otitis media; cervical lymphadenitis; streptococcal sore throat; infected tooth sockets; Vincent's infection; acne and superficial skin infections; impetigo; boils, furuncles and carbuncles; lung abscess; bronchitis; mastitis; osteomyelitis; wound infections; postoperative wound infections and infected lacerations; staphylococcal enteritis, staphylococcal diarrhea of the newborn; peritonitis (caused by susceptible organisms); pelvic inflammatory disease; gonorrhea; gonococcal arthritis; urethritis; scarlet fever; erysipelas.

SUPPLIED: *Blue and white capsules of* 'CATHOCILLIN' *—each containing 125 mg. of* 'CATHOMYCIN' *(as Sodium Novobiocin, Merck) and 75 mg. (125,000 units) Potassium Penicillin G; bottles of 16.*

In one prescription the one antibiotic product most likely to be effective

MSD MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC., PHILADELPHIA 1, PA.

The Contribution of *Enriched Bread* to Childhood Nutrition



"Children reared on nutritionally adequate diets have many advantages over those reared on poor diets. These advantages include: better growth and development; greater strength and vigor; and more evidence of good general nutrition."[1] The nutritional status of millions of American school children has been enhanced significantly by enriched bread during the past fifteen years, and for these reasons:

Enriched bread contains thiamine, riboflavin, niacin, calcium, iron, and protein. All have made important contributions to the reduction of deficiency diseases traced to the lack of these nutrients. Many authorities cite the virtual elimination of deficiency diseases in recent years as impressive evidence of the role enriched bread has played.[2]

Enriched bread, containing added nonfat dry milk, provides a highly nutritive protein combination derived from three sources —flour, milk and yeast—with milk and yeast proteins supplementing the flour protein. These proteins not only contribute to the maintenance and repair of children's tissues, but also to good growth.

Dental authorities agree that a good diet is an important factor in dental health. The complex carbohydrates present in bread—in contrast to the action of simple carbohydrates—do not readily diffuse into dental plaques and therefore are of low cariogenic activity.[3]

These are some of the reasons why the role of enriched bread, in improving the health of millions of American school children, has been referred to as one of the most important advancements in public health measures since compulsory pasteurization of milk.

1. Martin, E.A.: Roberts' Nutrition Work with Children, Chicago, University of Chicago Press, 1954, p. 53.
2. Sebrell, W.H.: Developing Modern Nutrition Programs, Public Health Reports, United States Department of Health, Education and Welfare *69*:277 (Mar.) 1954.
3. Joint Report of the Council on Dental Health and the Council on Dental Therapeutics of the American Dental Association: Sugar and Dental Caries: The Effect on the Teeth of Sweetened Beverages and Other Sugar-Containing Substances, J. Am. Dent. A. *47*:387 (Oct.) 1953.

THE VIRGINIA BAKERS COUNCIL
In co-operation with
THE AMERICAN BAKERS ASSOCIATION

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.



YOUR PATIENT NEEDS AN ORGANOMERCURIAL

Practicing physicians know that many years of clinical and laboratory experience with any medication are the only real test of its efficacy and safety.

Among available, effective diuretics, the organomercurials have behind them over three decades of successful clinical use. Their clinical background and thousands of reports in the literature testify to the value of the organomercurial diuretics.

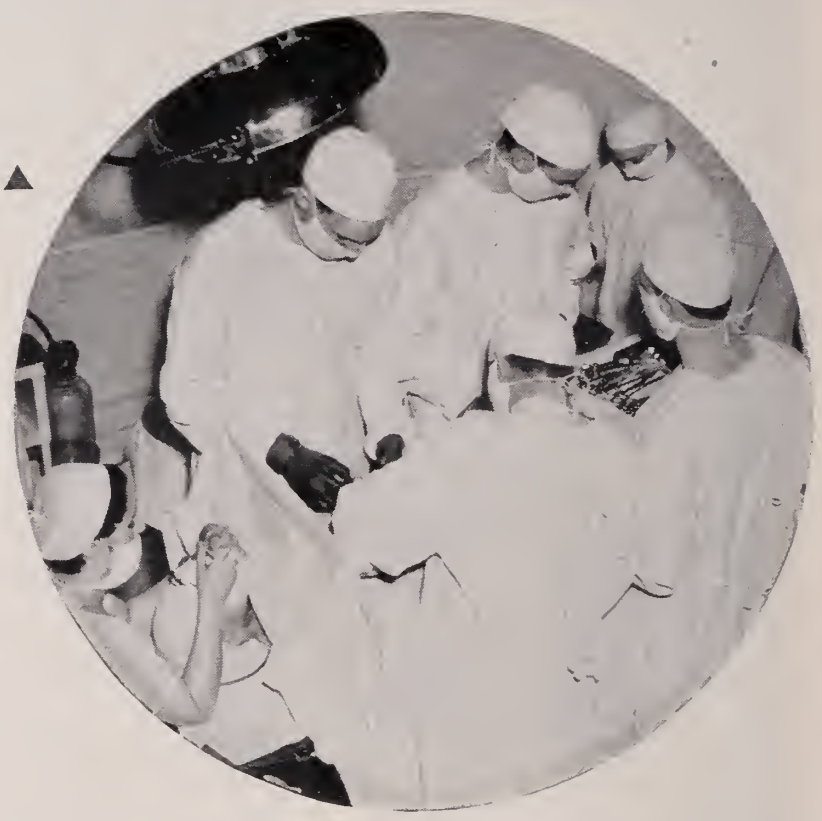
TABLET
NEOHYDRIN®
BRAND OF CHLORMERODRIN (18.3 MG. OF 3-CHLOROMERCURI-2-METHOXY-PROPYLUREA EQUIVALENT TO 10 MG. OF NON-IONIC MERCURY IN EACH TABLET)

a standard for initial control of severe failure

MERCUHYDRIN® SODIUM
BRAND OF MERALLURIDE INJECTION

LAKESIDE

02156



Specializing

in your patients' HOSPITAL, SURGICAL and MEDICAL insurance problems makes the local AMERICAN HEALTH AGENT a valued "Doctor's Aide."

AMERICAN HEALTH INSURANCE CORPORATION BALTIMORE MD

Complete Local Service In Your State

Because he is a specialist who focuses his attention on Health Insurance, the local American Health Agent has won a position of friendship and trust.

As a career agent in his chosen field, it is his purpose to serve both Doctor and patient as a true "friend in need" at all times, with prompt settlements, efficient service, and a sympathetic understanding of the problems of the medical profession.

American Health
INSURANCE CORPORATION

FIRST NATIONAL BANK BUILDING, BALTIMORE 2, MD.



+

B_6

Striking relief from nausea of pregnancy

'MAREDOX'

brand Cyclizine Hydrochloride and
Pyridoxine Hydrochloride

Just one tablet a day, on rising or at night, restores the nausea-free status to most pregnant women.

Each tablet of 'Maredox' contains:
'Marezine'® brand
Cyclizine Hydrochloride . . . . . 50 mg.
Pyridoxine Hydrochloride . . . . . 50 mg.

BURROUGHS WELLCOME & CO. (U. S. A.) INC., Tuckahoe, New York



Answer to the professional need for a liquid oral penicillin...

in which quality and economy are combined.

Buffered Penicillin G. Powder... For Preparation of Oral Solution

HONEY-CILLIN '300' . . . uniform, stable, economical, inviting appearance, pleasant tasting . . . is packaged as dry powder for added stability and economy. Each 60 cc. bottle of HONEY-CILLIN '300' provides 3,600,000 units of penicillin — or 12 teaspoonful doses of 300,000 each. Desirable for pediatric practice because of its convenience and good taste— and for patients of all ages where difficulty in swallowing tablets is found.

and . . . when the sulfonamides are indicated . . .



choose one of the original Honey-Sulfonamides, Honey-Diazine to provide sulfadiazine alone, or Honey-Trisulfas when the triple meth-dia-mer sulfonamides are preferred. Both preparations are smooth, free-flowing suspensions, contain pure clover honey in every drop. Both provide one grain microcrystalline sulfa per cc., buffered with sodium citrate and sodium lactate.

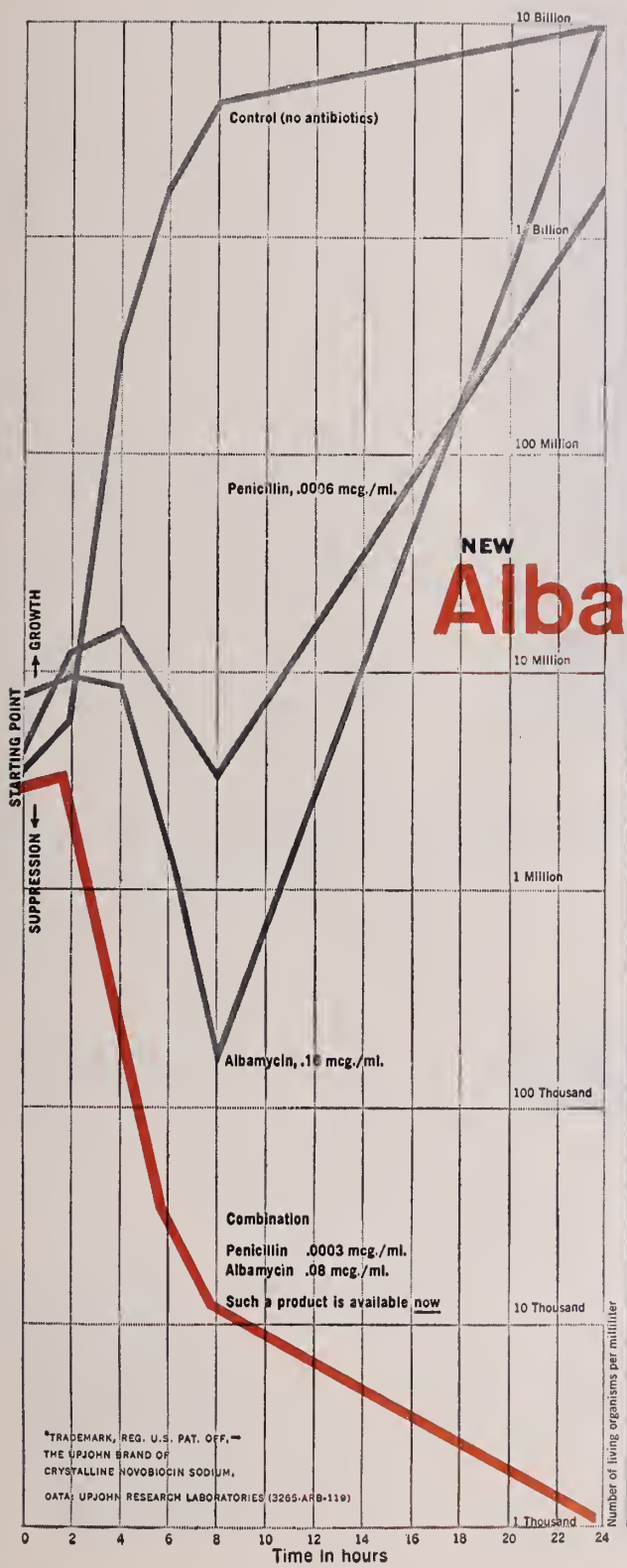
Both give unexcelled, sustained sulfonamide blood levels.

CLINICAL SAMPLES AND LITERATURE ON REQUEST

"WORTHWHILE PRESCRIPTION SPECIALTIES ETHICALLY PROMOTED"

PHYSICIANS PRODUCTS CO. INCORPORATED

PETERSBURG, VIRGINIA



*TRADEMARK, REG. U.S. PAT. OFF.—THE UPJOHN BRAND OF CRYSTALLINE NOVOBIOCIN SODIUM.

DATA: UPJOHN RESEARCH LABORATORIES (3265-ARB-119)

average dosage only t.i.d.

antibiotic synergism

The three gray lines of this graph show the growth rate of a penicillin-sensitive strain of Staphylococcus (Micrococcus pyogenes, var. aureus) under 3 conditions:

1. In the absence of antibiotics
2. In the presence of subinhibitory concentration of penicillin
3. In the presence of subinhibitory concentration of Albamycin*

Even half these subinhibitory concentrations of penicillin and Albamycin, **when combined,** (black line) produce a dramatic **bactericidal effect.**

NEW

Alba-Penicillin*

(Albamycin plus penicillin)

Compare it with the antibiotic you are currently using:

Range of effectiveness: Alba-Penicillin is effective against the organisms that cause the overwhelming majority of bacterial infections (Staphylococci, Streptococci, Pneumococci, Proteus).

Risk of resistance: Because in vitro tests show this combination is synergistic against even Staphylococci **already** resistant to all other antibiotics, the risk of resistance is minimized.

Risk of enterocolitis: Because it has little or no effect on the predominant Gram-negative intestinal bacteria, and is highly effective against Staphylococci, there is virtually no danger of enterocolitis due to alteration in intestinal flora, or of other side effects such as perianal pruritus.

Convenience: Alba-Penicillin is oral therapy, and the average adult dosage is only **1 to 2 capsules t.i.d.,** which eliminates middle-of-the-night medication.

It is available in bottles of 16 capsules. Each capsule contains 250 mg. Albamycin (as novobiocin sodium, crystalline) and 250,000 units penicillin G potassium.

Upjohn

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN



symptomatic relief... plus

Achrocidin*

Tetracycline-Antihistamine-Analgesic Compound

Available on prescription only

ACHROMYCIN® Tetracycline . . 125 mg.
Phenacetin . . . . . 120 mg.
Caffeine . . . . . 30 mg.
Salicylamide . . . . . 150 mg.
Chlorothen Citrate . . . . . 25 mg.
Bottle of 24 tablets.

ACHROCIDIN is a well-balanced, comprehensive formula directly modifying the complications of the common cold or upper respiratory infections.

In addition to the direct benefit of rapid symptomatic improvement, ACHROCIDIN promptly controls the bacterial component frequently responsible for the development in susceptible individuals of sequelae such as otitis media, sinusitis, adenitis, and bronchitis.

ACHROCIDIN is convenient for you to prescribe—easy for the patient to take. Average adult dose: two tablets three or four times daily.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

Lederle

*TRADEMARK

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AMERICAN MEDICAL ASSOCIATION

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EVERY WOMAN WHO SUFFERS IN THE MENOPAUSE DESERVES "PREMARIN"®

widely used natural, oral estrogen

AYERST LABORATORIES

New York, N. Y. • Montreal, Canada

5645



The Lunatic wept



ABRAHAM SIMMONS couldn't feel the frost that lined his cage, or taste the swill they fed him, or chafe at his iron chains—so his keepers said. He was a madman.

Then when his visitor, little Miss Dix, spoke softly to him, why did he weep?

Dorothea Lynde Dix knew why. And her knowledge kept her fighting all her life to get the mentally ill away from pits and cages, whips and chains, and into hospitals.

In nearly 40 years, she paused only once—to render heroic service as superintendent of nurses in the Civil War. Then again she began investigating, writing, fundraising, politicking, until this frail ex-school teacher had pushed a whole country into one of the finest reforms in its history: the sane treatment of the insane.

Dorothea Dix was fortunate in having one powerful ally: the American people. For as history will show, Americans are seldom self-satisfied; they long to do right. That urge has helped them build a strong, stable nation in a troubled world—and it has helped make their country's Savings Bonds a rock-ribbed assurance of security.

The will and purpose of 168 million Americans back U.S. Savings Bonds, back them with the best guarantee you could possibly have. Your principal guaranteed safe to any amount—your interest guaranteed sure—by the greatest nation on earth. If you want *real* security, buy U.S. Savings Bonds. And hold on to them.

Safe as America—U. S. Savings Bonds

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Rauwiloid®

A Better Antihypertensive

. . . because among all Rauwolfia preparations Rauwiloid (alseroxylon) is maximally effective and maximally safe . . . because least dosage adjustment is necessary . . . because the incidence of depression is less . . . because up to 80% of patients with mild labile hypertension and many with more severe forms respond to Rauwiloid alone.

A Better Tranquilizer, too

. . . because Rauwiloid's *nonsoporific* sedative action relieves anxiety in a long list of unrelated diseases not necessarily associated with hypertension . . . without masking of symptoms . . . without impairing intellectual or psychomotor efficiency.

Dosage: Simply two 2 mg. tablets at bedtime. After full effect one tablet suffices.

Best first step when more potent drugs are needed

Rauwiloid is recognized as basal medication in all grades and types of hypertension. In combination with more potent agents it proves synergistic or potentiating, making smaller dosage effective and freer from side actions.

Rauwiloid®+Veriloid®

In moderate to severe hypertension this single-tablet combination permits long-term therapy with dependably stable response. Each tablet contains 1 mg. Rauwiloid and 3 mg. Veriloid. Initial dose, 1 tablet t.i.d., p.c.

Rauwiloid®+ Hexamethonium

In severe, otherwise intractable hypertension this single-tablet combination provides smoother, less erratic response to hexamethonium. Each tablet contains 1 mg. Rauwiloid and 250 mg. hexamethonium chloride dihydrate. Initial dose, ½ tablet q.i.d.

Riker LOS ANGELES

For Real Pain ...give real relief:

A.P.C. WITH Demerol® tablets

Each tablet contains:

Aspirin	200 mg. (3 grains)
Phenacetin	150 mg. (2½ grains)
Caffeine	30 mg. (½ grain)
Demerol hydrochloride	30 mg. (½ grain)

Average Dose:

1 or 2 tablets.

Narcotic blank required.

Potentiated Pain Relief

WINTHROP LABORATORIES

New York 18, N. Y. • Windsor, Ont.

Demerol (brand of meperidine), trademark reg. U.S. Pat. Off.

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It is a certainty that they will continue to patronize the concerns whose advertisements appear regularly in our pages.

OUR BEST WISHES
FOR A SUCCESSFUL
AND PROSPEROUS
1957

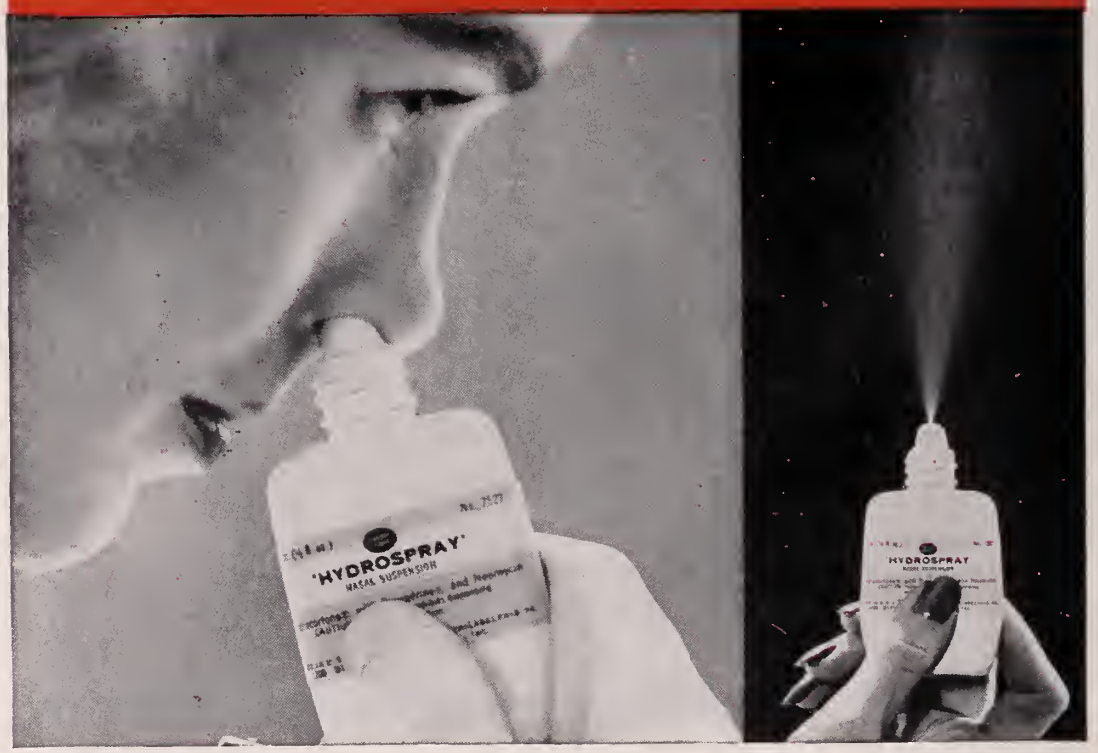
Virginia Medical Monthly

'Hydrospray' NASAL SUSPENSION

(HYDROCORTONE® WITH PROPADRINE® AND NEOMYCIN)

Anti-inflammatory—
Decongestant—Antibacterial

MAJOR ADVANTAGES: New synergistic anti-inflammatory, decongestant and antibacterial formula. High steroid content assures effective response.



Topically applied hydrocortisone[1] in therapeutic concentrations has been shown to afford a significant degree of subjective and objective improvement in a high percentage of patients suffering from various types of rhinitis. HYDROSPRAY provides HYDROCORTONE in a concentration of 0.1% plus a safe but potent decongestant, PROPADRINE, and a wide-spectrum antibiotic, Neomycin, with low sensitization potential. This combination provides a three-fold attack on the physiologic and pathologic manifestations of nasal allergies which results in a degree of relief that is often greater and achieved faster than when any one of these agents is employed alone.
INDICATIONS: Acute and chronic rhinitis, vasomotor rhinitis, perennial rhinitis and polyposis.

SUPPLIED: In squeezable plastic spray bottles containing 15 cc. HYDROSPRAY, each cc. supplying 1 mg. of HYDROCORTONE, 15 mg. of PROPADRINE Hydrochloride and 5 mg. of Neomycin Sulfate (equivalent to 8.5 mg. of neomycin base).

MSD

MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC.
PHILADELPHIA 1, PA.

REFERENCE: 1. Silcox, L. E., *A.M.A. Arch. Otolaryng.* 60:431, Oct. 1954.

distinctive readings throughout the critical range...

color-calibrated CLINITEST®

BRAND

the urine-sugar test with the standardized, laboratory-controlled color scale

- full color calibration for the urine-sugar spectrum
- easily read, firmly established blue-to-orange scale
- sharp color distinction between readings

AMES COMPANY, INC · ELKHART, INDIANA
Ames Company of Canada, Ltd., Toronto

05656

clinically proved, before introduction, in over 12,000 patients

announcing

*Compazine**

a further advance in psychopharmacology

a true "tranquilizer" with specific action in psychic and psychosomatic conditions

indicated in mental and emotional disturbances — mild and moderate — encountered in everyday practice

available in 5 mg. tablets

minimal side effects

Few drugs have been so thoroughly studied before introduction or introduced with such a substantial background of clinical experience.

In the more than 12,000 cases treated with 'Compazine' here and abroad, and in experimental studies at very high dosage, no blood change or jaundice attributable to 'Compazine' was observed.

Smith, Kline & French Laboratories, Philadelphia 1

*Trademark for proclorperazine, S.K.F.

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VIRGINIA MEDICAL MONTHLY



THE N.Y. ACADEMY OF MEDICINE
FEB 11 1957
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QUIETS AN AGITATED COUGH REFLEX

• SYRUP

DOLOPHINE HYDROCHLORIDE

(Methadone Hydrochloride, Lilly)

more effective in smaller doses than opium derivatives

Dosage: 1 teaspoonful; repeated only when necessary.

Palatable, cherry-flavored Syrup 'Dolophine Hydrochloride,' 10 mg. per 30 cc., is supplied in bottles of one pint and one gallon.

• Narcotic order required.

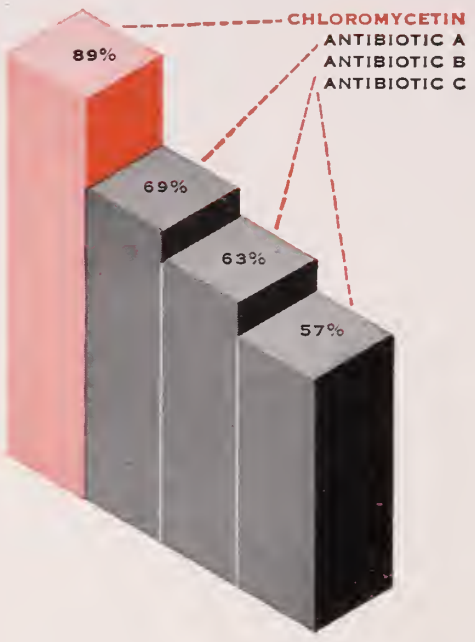
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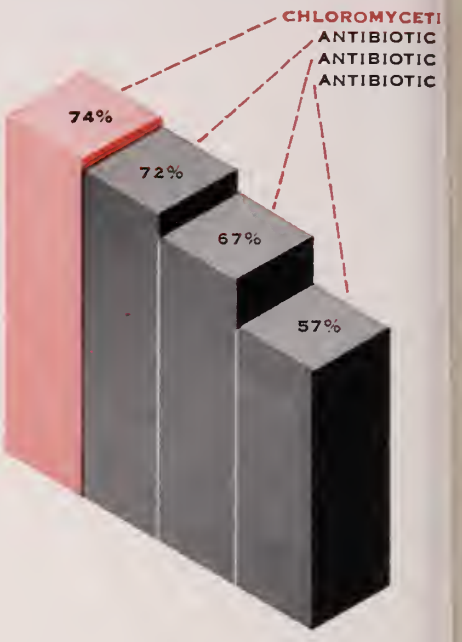
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FEBRUARY, 1957

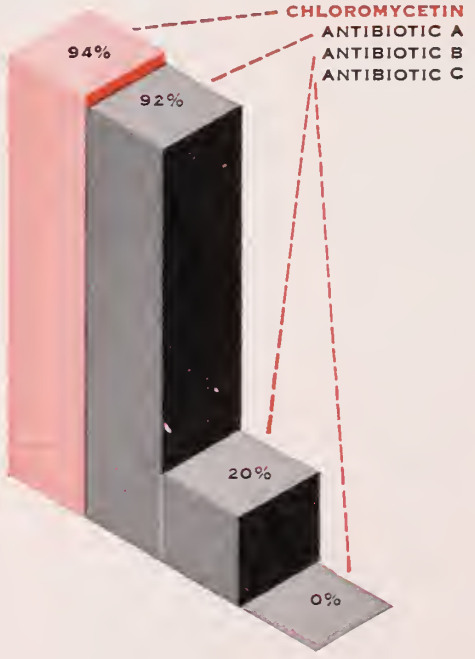
SENSITIVITY OF COMMON PATHOGENS TO **CHLOROMYCETIN** AND THREE OTHER MAJOR ANTIBIOTIC AG



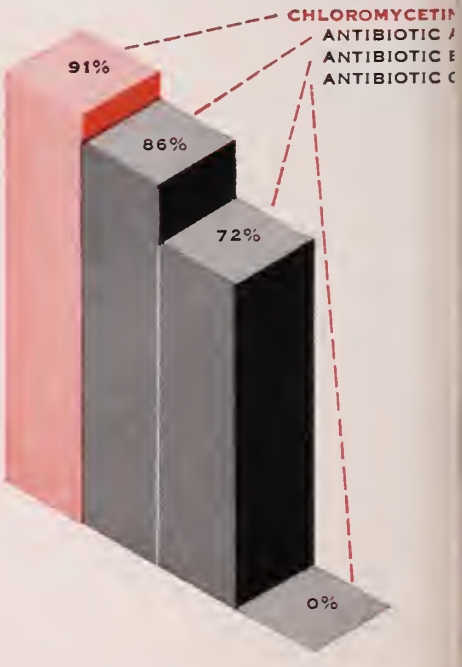
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(363-418 STRAINS)



HEMOLYTIC MICROCOCCUS AUREU
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ESCHERICHIA COLI
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(153-193 STRAINS)

greater antibacterial efficacy...

Chloromycetin®

for today's problem pathogens

Because of the increasing emergence of pathogenic strains resistant to commonly used antibiotics, judicious selection of the most effective agent is essential to successful therapy. *In vitro* sensitivity studies serve as a valuable guide to the antibiotic most likely to be most effective. Both clinical experience and sensitivity studies indicate the greater antibacterial efficacy of CHLOROMYCETIN (chloramphenicol, Parke-Davis) treatment for many resistant infections.[1-7]

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References (1) Altemeier, W. A.; Culbertson, W. R.; Sherman, R.; Cole, W.; Elstun, W., & Fultz, C. T.: *J.A.M.A.* 157:305 (Jan. 22) 1955. (2) Austrian, R.: *New York J. Med.* 55:2475 (Sept. 1) 1955. (3) Murphy, F. D., & Waisbren, B. A., *in* Murphy, F. D.: Medical Emergencies: Diagnosis and Treatment, ed. 5, Philadelphia, F. A. Davis Company, 1955, p. 557. (4) Weil, A. J., & Stempel, B.: *Antibiotic Med.* 1:319, 1955. (5) Jones, C. P.; Carter, B.; Thomas, W. L., & Creadick, R. N.: *Obst. & Gynec.* 5:365, 1955. (6) Kass, E. H.: *Am. J. Med.* 18:764, 1955. (7) Tebrock, H. E., & Young, W. N.: *New York J. Med.* 55:1159 (Apr. 15) 1955.

...raph is adapted ...Altemeier, Cul... ...n, Sherman, Cole, ..., & Fultz.[1]

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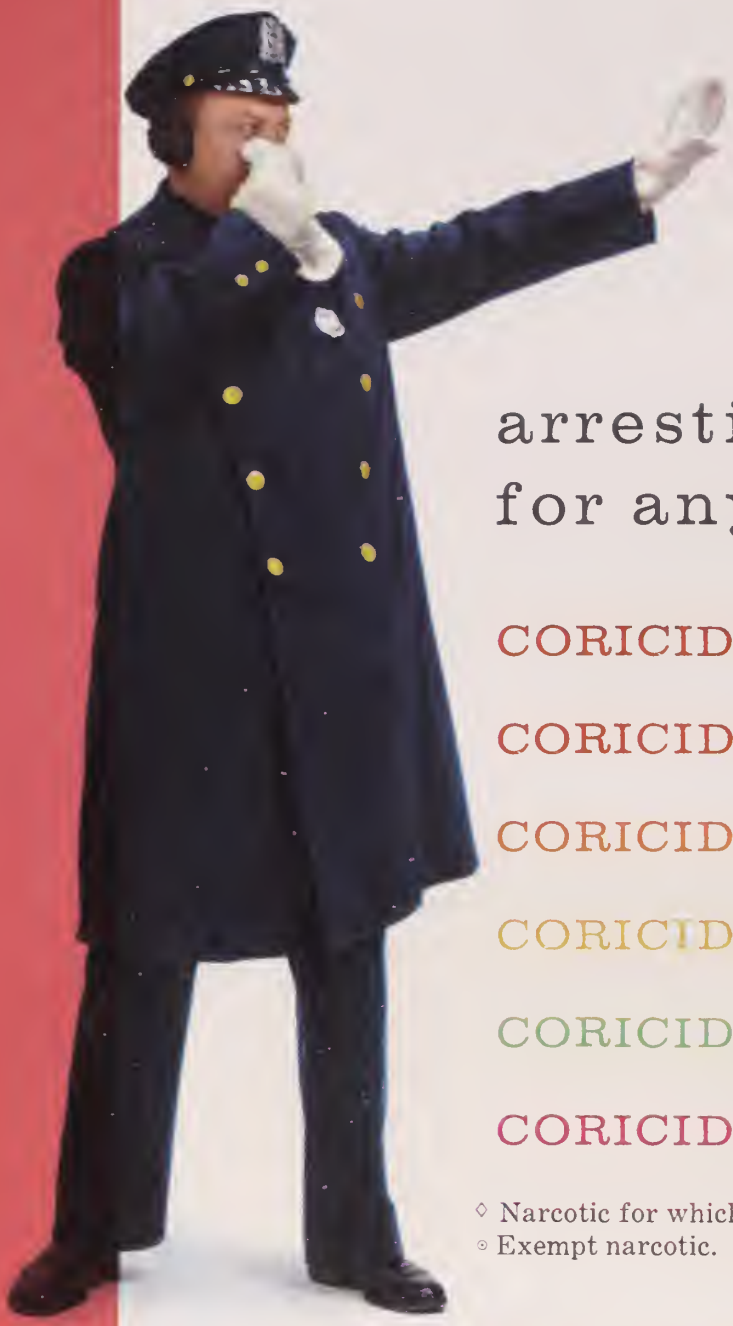
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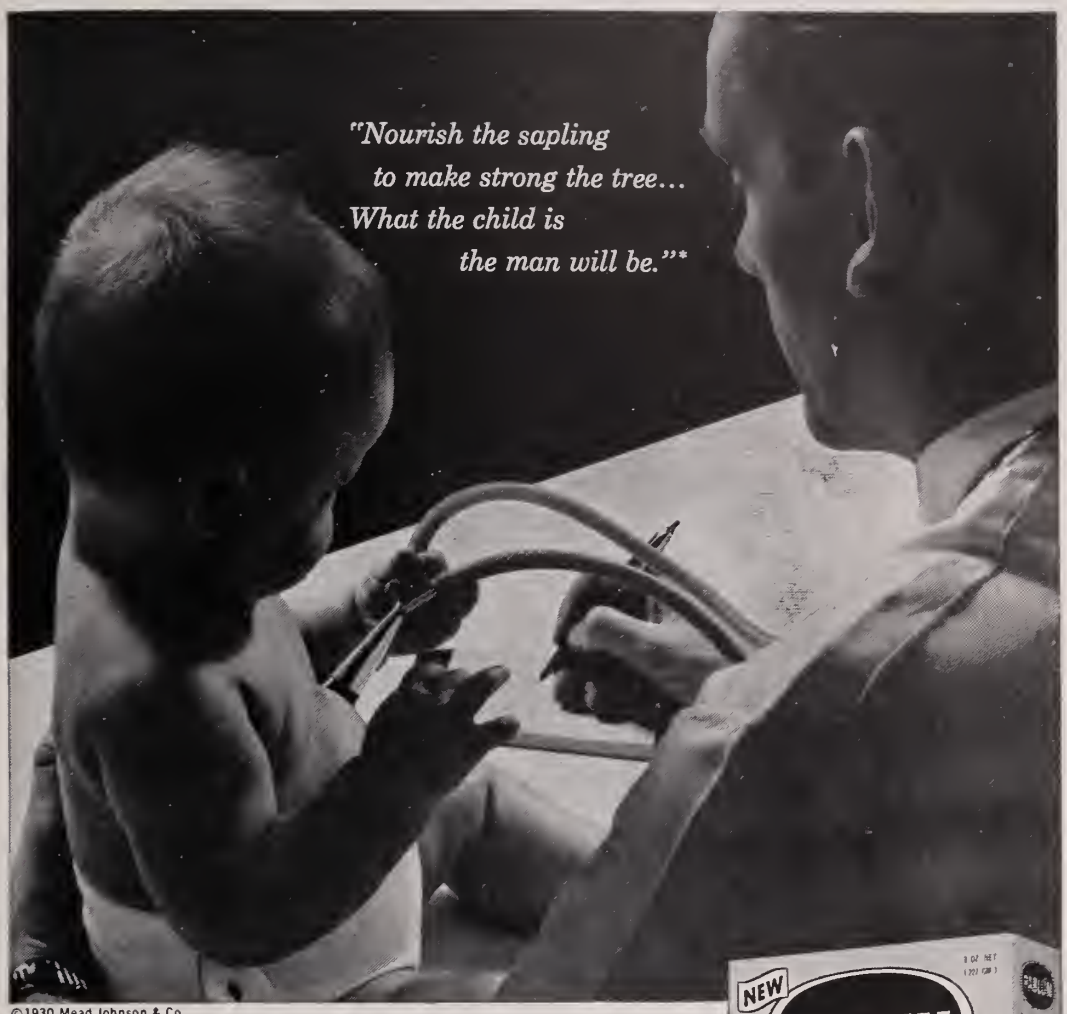
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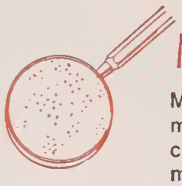
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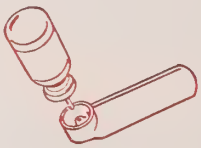


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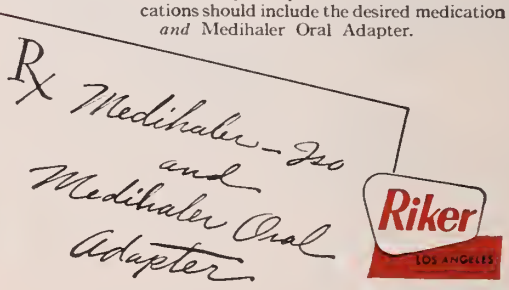
Riker brand of epinephrine 0.5% solution in inert, nontoxic aerosol vehicle. Each ejection delivers 0.125 mg. epinephrine. In 10 cc. vial with metered-dose valve, sufficient for 200 inhalations.

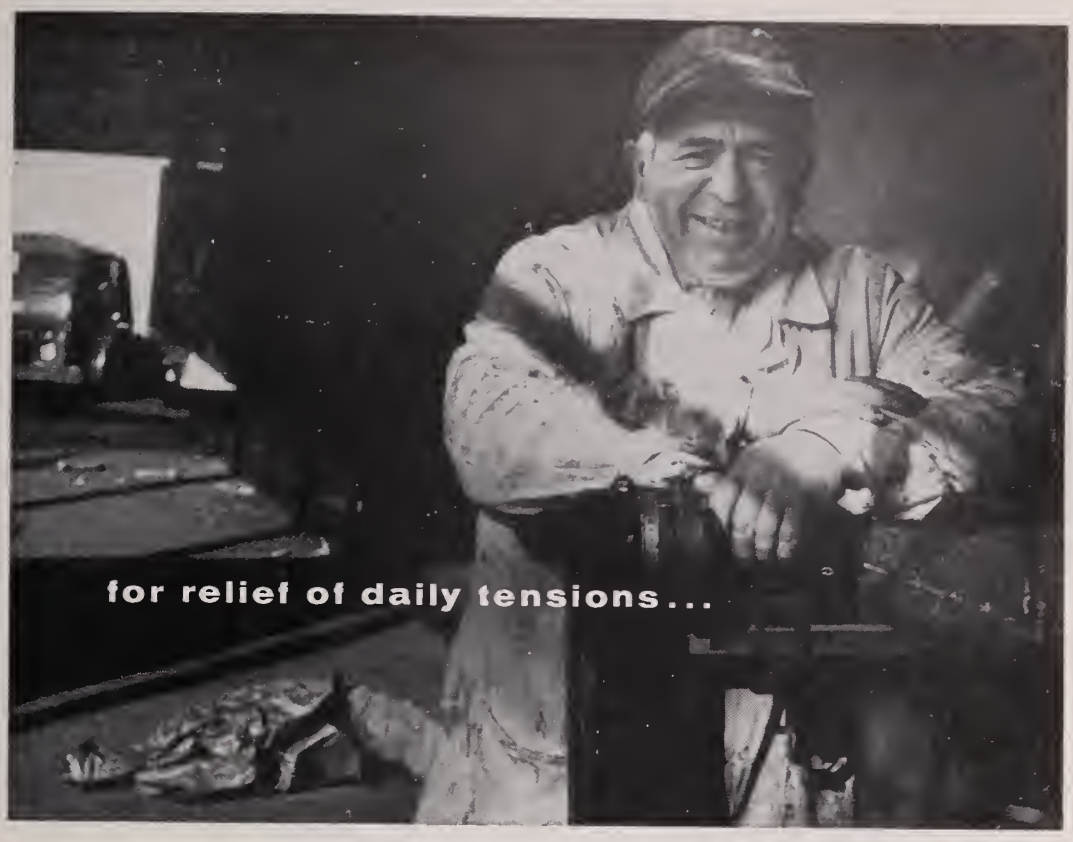
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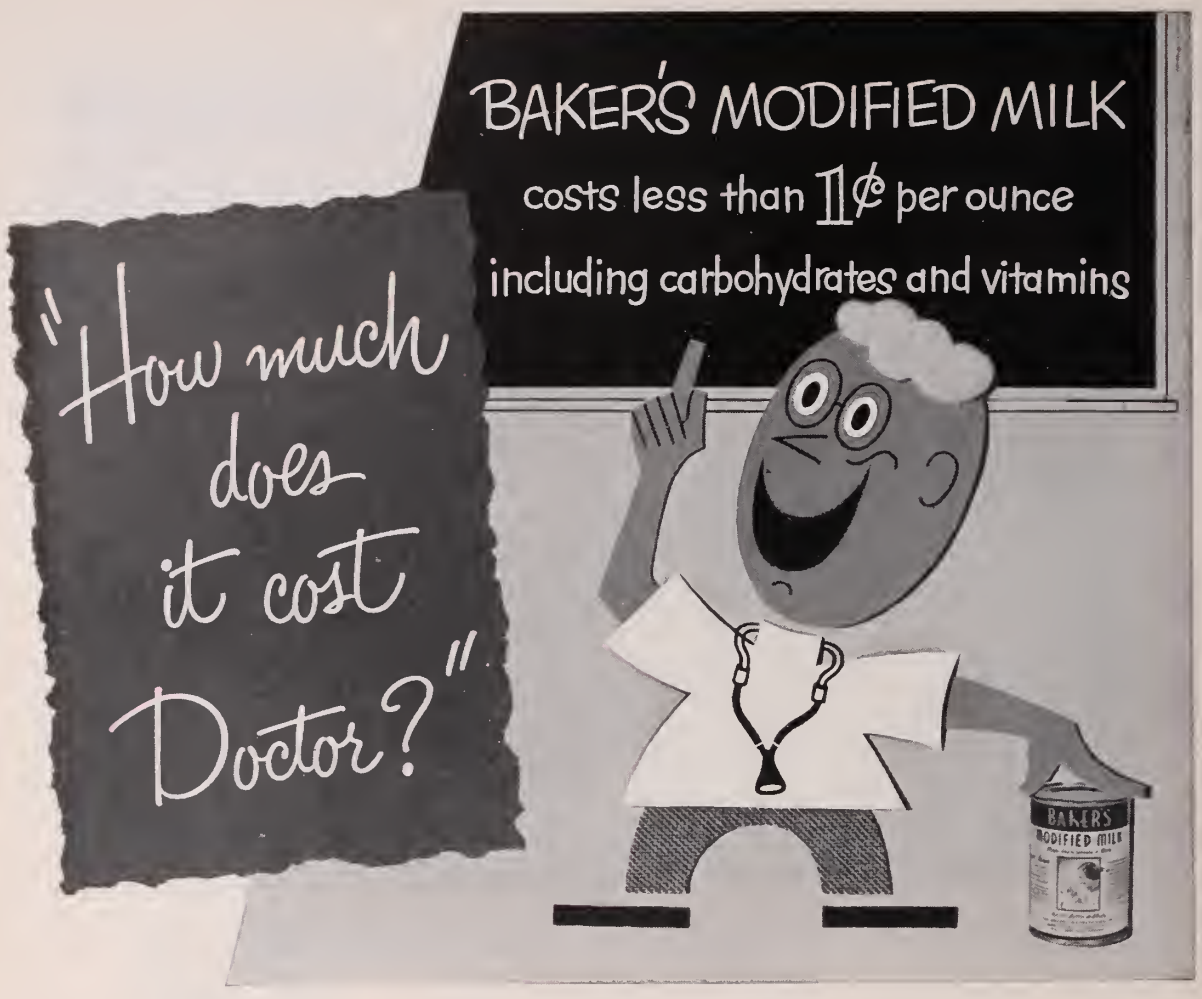
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*Ferguson, J. T.: J. Am. Geriatrics Soc. *4*:1080, 1956.

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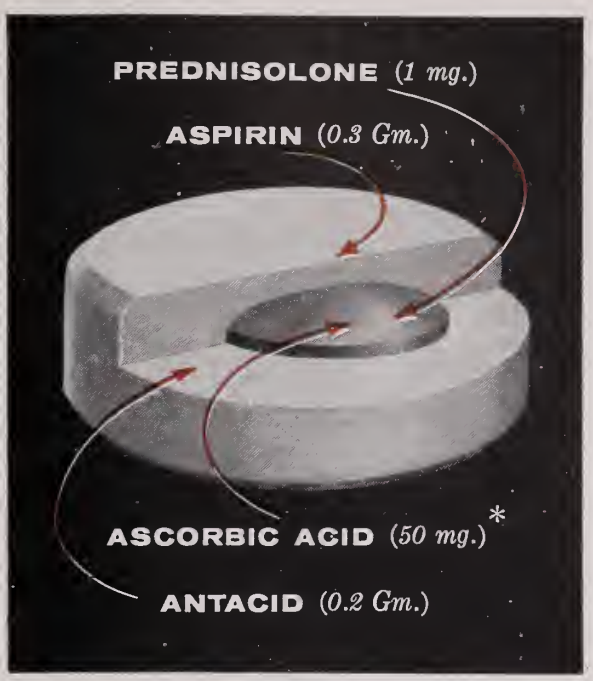
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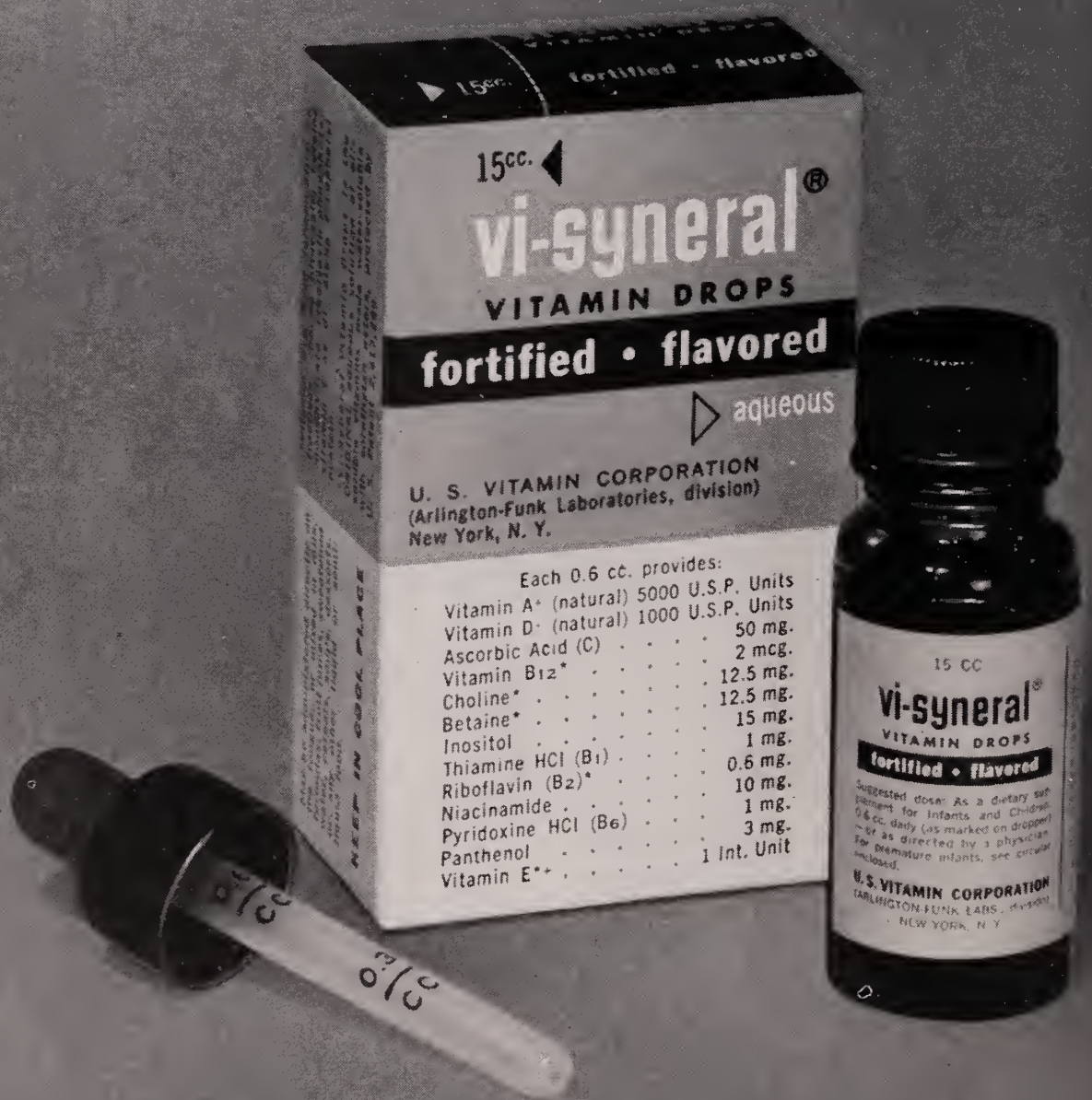
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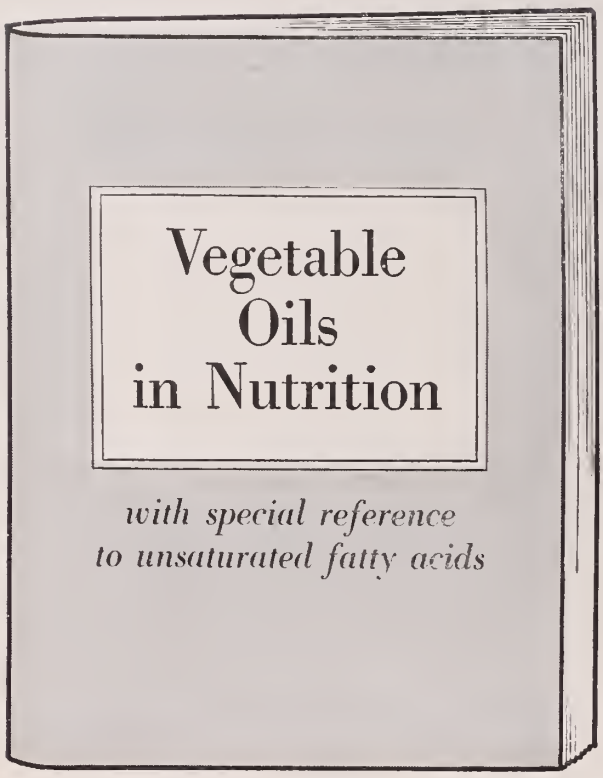
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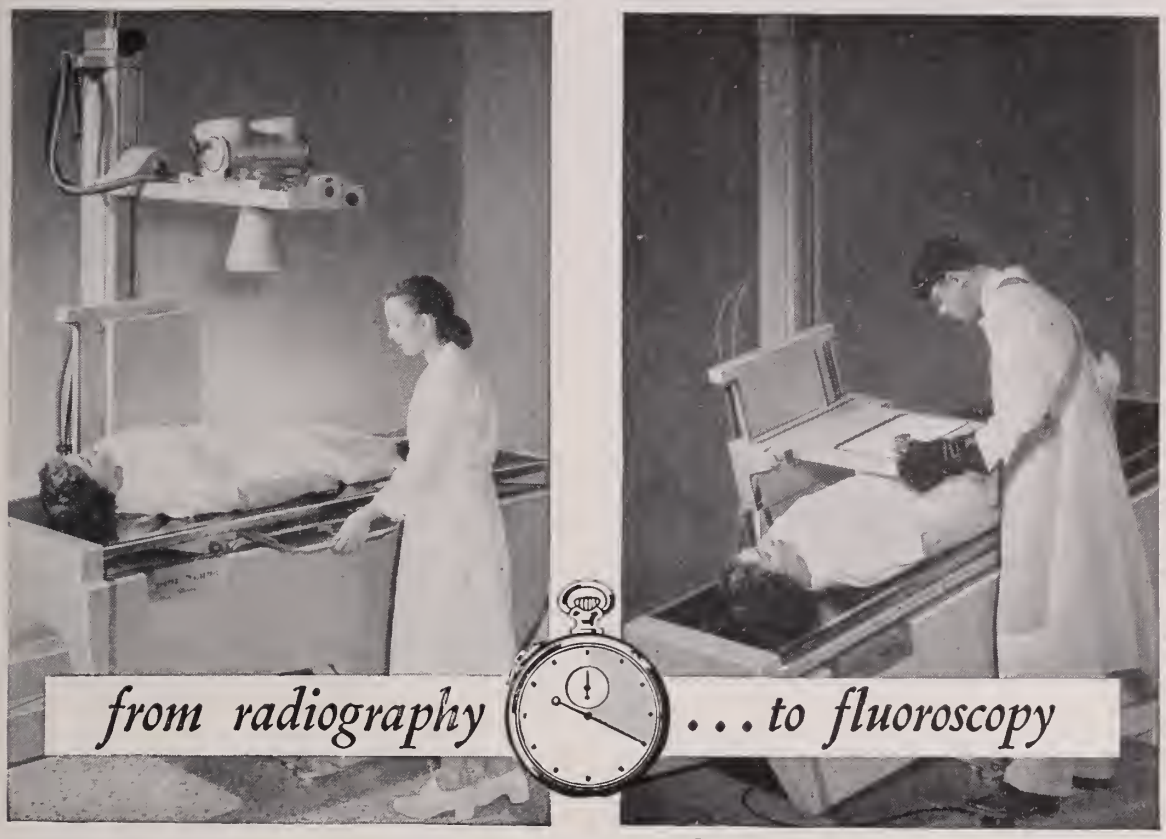
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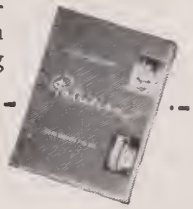


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Erythromycin in Treating Pneumonia

A 27-year-old man, a chronic alcoholic, was admitted with a history of an alcoholic spree followed by a cough, greenish sputum and chills and fever.

Physical examination showed a temperature of 104 F. and indicated pneumonia in the right lower lobe. This was confirmed by X-ray. The sputum revealed gram-positive diplococci and blood culture subsequently grew Type VII pneumococci.

The patient was treated with erythromycin, 300 mg. every six hours per os. His temperature dropped to normal by 48 hours and X-ray of the chest revealed considerable clearing by the fourth hospital day. After 10 days hospitalization, the patient was fit for discharge.[1]

First Antibiotics Symposium, we reported the successful treatment with thromycin of *H. influenzae* pneumonia and bacteremia. A second patient with *H. influenzae* pneumonia and bacteremia had a clinical course almost identical to the one previously reported, with cure obtained by treatment with 500 mg. of erythromycin per os every four hours for 14 days.

Of these 132 patients with bacterial pneumonia, 127 (96%) had a good clinical result. One patient with lobar pneu

"Highly Effective in Pneumonia"

In one investigation, 75 adult patients with bacterial pneumonia were treated with erythromycin. In his summary, the clinician reported: "It is concluded that erythromycin is highly effective in the treatment of pneumonia due to gram-positive bacteria."[2]

This, of course, is only one of many reports showing the effectiveness of ERYTHROCIN against coccic infections. You'll get the same good results (nearly 100% in common, bacterial respiratory infections) when you prescribe ERYTHROCIN. Abbott

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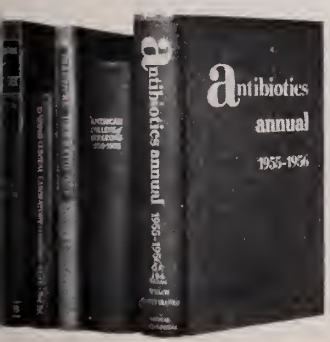
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"No Serious Side Effects Occurred"

After a study of 171 patients treated with erythromycin, the investigator wrote: "No serious side effects occurred with prolonged therapy or with doses up to 8 Gm. per day in the severe infections."[1]

Actually, ERYTHROCIN stands on a remarkable record of safety. After four years, there's not a single report of a severe or fatal reaction attributable to erythromycin. In addition, you'll find allergic manifestations rarely occur. *Filmtab* ERYTHROCIN Stearate (100 and 250 mg.), in bottles of 25 and 100. Abbott

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1. Romansky, M.J., et al., Antibiotics Annual 1955-1956, p. 48.
2. Waddington, W. S., Maple, F. C., and Kirby, W. M. M., A.M.A. Archives of Internal Medicine, 1954, p. 556.

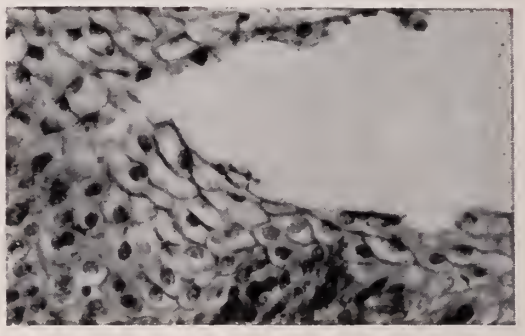
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HOW VAGISEC LIQUID

PENETRATES

RECESSES OF VAGINA AND EXPLODES TRICHOMONADS OFTEN MISSED

Photomicrograph of section of epithelium of normal vaginal mucosa, enlarged 750 times, shows uneven surface where trichomonads hide. VAGISEC penetrates surface and explodes organisms in hard-to-reach areas.



TOO OFTEN AN ORDINARY trichomonacide fails to cure vaginal trichomoniasis because it has little or no effect on parasites that are not on the surface.[1] Trichomonads burrowed deeply into the roughened mucosa survive and set up new foci of infection. In fact, even a few hidden trichomonads remaining after treatment can cause acute exacerbations. With VAGISEC® liquid and jelly you can overcome this most troublesome problem.

Penetrates thoroughly — This new and unique trichomonacide spreads out and wets the entire vaginal surface. It rapidly dissolves mucinous materials, fats and blood clots.[1] It penetrates the cellular debris that lines the vaginal walls and shields the parasites, reaching trichomonads deep in their hiding places.

Explodes trichomonads — VAGISEC liquid actually explodes trichomonads within 15 seconds after douche contact.[2] Two surface-acting agents and one chelating agent combine to weaken the cell membrane, to remove the waxes and lipids, and to denature the protein. With its cell wall destroyed, the parasite imbibes water, swells and explodes. All this occurs within 15 seconds. Only scattered fragments remain.

Proves highly effective — With the Davis technique† you can now rid patients of "trich," even cases that have resisted other treatment. VAGISEC liquid was developed as "Carlendacide," by Dr. Carl Henry Davis, M.D., noted gynecologist and author, and C. G. Grand, research physiologist.[1] Clinical trials by more than 150 physicians show better than 90 per cent success.[3]

Use liquid and jelly — In the Davis technique, VAGISEC liquid is used in office therapy. At the same time, liquid and jelly are prescribed for home use. They are well tolerated, leave no messy discharge or stain.

Office treatment — Expose vagina with speculum and wipe walls dry with cotton balls. Then wash thoroughly with a 1:100 dilution of VAGISEC liquid. Remove excess fluid with cotton balls. Dr. Davis recommends six treatments.

Home treatment—Patient douches with VAGISEC liquid every night or morning and then inserts VAGISEC jelly. Home treatment is continued through two menstrual periods, but omitted on office treatment days. Douching contraindicated in pregnancy.

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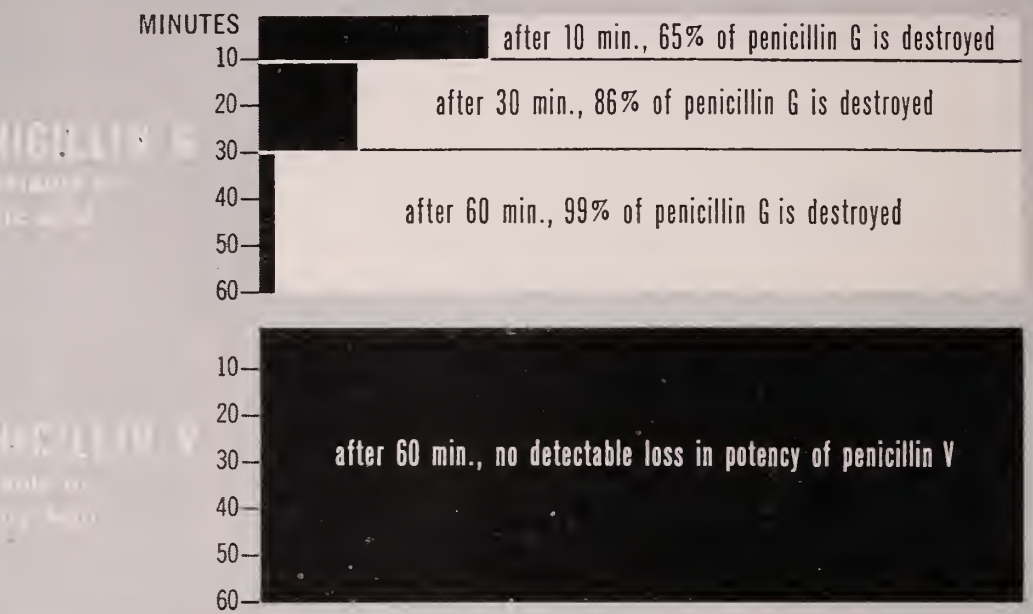
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Guest Editorial....

Surgical Relief of Severe Intractable Pain

EVERY PRACTICING physician, whether a generalist or a specialist, meets almost daily problems of severe intractable pain. Occasionally, it is useful to summarize our present knowledge about the types of such pain and their relief, surgical or otherwise, so that this information may be as widespread as possible, thus enabling these sufferers to obtain prompt relief.

There is no question that the best way to relieve pain of severe intractable malignancy is by dividing the afferent nerves from the area of the malignancy to the central nervous system. This includes posterior rhizotomy and cordotomy (devised by Frazier and Spiller in 1912) at various levels. The statements in this article refer to pain not nccessarily malignant but unrelievable by any surgical procedures directed toward eradication of the primary disease. In recent years, we have found in our clinic that *cervical* cordotomy often serves even better than thoracic cordotomy in relieving the unfortunate individual with primary or metastatic carcinoma. In the first place, one wishes to do only one major procedure for pain relief in these patients if at all possible. Therefore, provided the risk is no greater, the higher the section in the cord is made the better as it takes care of any subsequent spread of the malignancy upward. Furthermore, the patients seem to do just as well with the *upper cervical* section (at the second to the fourth cervical vertebral level) of the spinothalamic tract as they do with the upper thoracic section and perhaps have less bladder difficulty post-operatively with the bilateral cervical operation than with the bilateral thoracic cordotomy. Light touch is preserved post-operatively as is motor power in all extremities. Cervical cordotomy does not, however, give the patient quite a high enough level to take care of malignant pain in the shoulder and upper chest. This locale requires an associated homolateral posterior rhizotomy at the same time and through identical exposure that the contralateral cordotomy is done. This applies particularly to carcinoma of the breast that has invaded the brachial plexus and axilla and to superior sulcus pulmonary tumor (Pancoast tumor). We believe that the section of afferent roots and/or cordotomy is far superior, as a rule, to sympathectomy or lobotomy in cases of pain due to malignancy. It is true that in some of the malignancies, that are perhaps considered too far advanced to have the patient submitted to cordotomy, they still will obtain definite relief from a bilateral anterior frontal lobotomy (so-called "pre-frontal" lobotomy), *especially if narcotic addiction is fixed* at the time of operation. Cordotomy is also occasionally helpful in patients with *non-malignant conditions,* such as severe spondylitis with intractable unilateral or bilateral hip or leg pain not relieved by orthopedic management.

Sympathectomy is particularly helpful in obscure visceral pain in the liver, kidney and pancreas. We have had a number of cases of this category in which there was marked relief of pain by thoracic sympathectomy combined with splanchnicectomy on the affected side. This includes pain in the ureter from inflammatory stricture and also in certain cases of pancreatitis in which latter disease *bilateral* thoracic sympathectomy may be necessary. Sympathectomy is also occasionally utilized in phan-

tom limb pain (see below) and in causalgic states, especially if done *early,* and in amputation stump pain. The results here are not universally as good as in abdominal visceral discomfort and the vascular syndromes (Buerger's and Raynaud's disease). Sympathectomy is also of value in other vascular pain such as intermittent claudication of the legs and terminal digit or "rest" pain in the feet.

In some of the malignant cases, particularly from the cervix, uterus, prostate and rectum when the disease is far advanced and bilateral in the pelvis, and there may be pulmonary metastases with severe intractable pain in the lower portion of the trunk and legs, subarachnoid alcohol in the lumbar area is very helpful and often will dramatically relieve the patient of severe bilateral hip, perineal and leg pain. This is, of course, a minor procedure carried out in the patient's room via ordinary lumbar puncture and may be repeated in a few days if necessary. Another rather minor procedure carried out in some clinics in an occasional case is repeated instillation of two per cent procaine deeply in each frontal lobe of the brain through simple burr openings in the skull with exellent results having been reported.

For the very distressing malignancies of the mouth, face, neck and head, a major procedure consisting of the division of the fifth and ninth cranial nerves, a portion of the vagus and the upper posterior cervical roots on the same side is necessary to relieve the patient entirely of his pain. This particularly applies to lesions such as carcinoma of the tongue, soft palate, gum, antrum and oral cavity confined mostly to one side. These patients are greatly relieved by this major procedure (which includes a combined cerebello-upper cervical cord exposure on one side) and it is remarkable how well they tolerate it even in the later decades of life, often being ambulatory a few days postoperatively.

Phantom limb pain has intrigued neurologists for a century or more. Our method of handling it now is as follows: first a spinal anesthesia is done and if the patient is certain that the pain is relieved for the duration of the anesthesia, *cordotomy* should effect permanent relief. However, in case of doubt, sympathetic lumbar blocks should also be tried with novocaine and if this gives definite temporary relief, *lumbar sympathectomy,* theoretically at least, should relieve the patient. If neither of these procedures appear indicated, *frontal lobotomy* or *sensory cortex ablation* would be warranted.

These same procedures, sympathectomy especially, are applicable to *causalgic pain* in incomplete nerve injuries particularly of the lower extremities. The most effective treatment is selected in the same manner as advocated for phantom limb pain. If the syndrome of "sympathetic" pain has been present a long time, it will probably be necessary, before a satisfactory result is obtained, to carry out a bilateral frontal lobotomy.

Intercostal neurectomies or posterior rhizotomy relieve certain patients with severe intractable pain from laparotomy or other scars and localized spondylitis, especially of the thoracic spine, with peripheral trunk pain. *Peripheral nerve crush* in ankles and feet relieves arteriosclerotic pain and that due to Buerger's disease in selected cases.

The above statements constitute the everyday methods of handling pain problems in our clinic today although it must be said that in other clinics sympathectomy may be used more widely than cordotomy and rhizotomy, or lobotomy more than cordotomy, depending upon the experience and inclination of the individual surgeons of those clinics. With the many surgical procedures (outlined above) available today, it is rare, indeed, that some effective operation or procedure cannot be utilized and carried to a satisfactory conclusion in the individual case of severe intractable pain.

J. M. Meredith, M.D.

Editor's Note: Dr. Meredith is surgeon-in-chief of the Department of Neurological Surgery, Medical College of Virginia, Hospital Division.

Bronchitis and Emphysema

E. E. MENEFEE, Jr., M.D.
Durham, North Carolina

IT IS HARDLY NECESSARY to discuss the signs and symptoms of bronchitis with this group. We in teaching institutions, as you know, have to emphasize to our undergraduate medical students that cough is frequently a symptom of tuberculosis, bronchiectasis, bronchogenic carcinoma, or other serious pulmonary disease. You know that faced with cough one always rules out these more dramatic diseases, but the vast majority of patients with such symptoms end up with a diagnosis of simple bronchitis. Bronchitis is a variable disease. For example, in Great Britain it has a high mortality rate while in the United States we have a mortality rate of about 1/60th of the English. Nevertheless, even with a low rate, I believe that bronchitis not infrequently leads to complications of a really significant nature.

I would like for you to think of bronchitis, at least for the moment, as either irritation or inflammation of the bronchi and bronchioles. Certainly the purest among you may object to this and will obviously point out that irritation can and does lead to inflammation. On the other hand, I think we so frequently think of an inflammatory reaction as being purely infectious that occasionally we lose sight of the irritative phenomenon and the part it plays.

We might divide the etiology of this disease into several different phases, and, when we do, it makes the entire problem come more easily and sharply into focus. Certainly infection is a frequent and important cause of bronchitis. When one realizes that we ordinarily, in a resting state, breathe in and out approximately 600,000 cc. of air per hour, and that this air, except in extraordinarily rare instances, must contain bacteria, fungi and viruses as well as "the normal flora of the nose and throat", it is simply amazing that infection in the air passages is not constantly present. It is obvious that the defense mechanism of the lung is extraordinarily good. Among defenses we might note the mechanical factor, such as the ciliated epithelium with their sweeping motion, the cough reflex which is primarily designed to clear the bronchi, and the peristaltic action of the bronchi themselves. In addition to these we have the so-called tissue and cellular immunity which is rather poorly understood, but nevertheless real.

Another frequent cause of bronchitis is allergy. Basically such allergic responses might be described as causing (a) contraction of the muscles of the bronchi and bronchioles, (b) edema of the mucosa of these air passages, and (c) production of thick mucus. It is quite evident that all of these interfere with the normal defense mechanism and, therefore, in addition to the purely allergic factors infection may well become superimposed.

Finally, and perhaps most important in the minds of a good number of people is irritation. We are all aware that certain chemicals, such as chlorine or sulphurdioxide cause intense irritation of the bronchial mucosa. Plain dust is frequently an irritating substance and dust and dirt from industrial plants, such as silica, fluorides, industrial gases, fumes and smoke, all may and do play an important part. Perhaps the greatest and the one that is most frequent is tobacco smoke. Climate also plays an important, although again not clearly understood, role. Finally, there are such things as aspiration secondary to cardiospasm or diverticula of the esophagus; or, perhaps more commonly, due to mineral oil used either as a laxative or nasal spray. In brief, the etiology of bronchitis may be infectious, allergic, or irritative. Which one of these is of the greatest importance I am unable to say. My friends who are allergists constantly emphasize to me their problems and their findings, and I must say that I am impressed with their reports and their ability to help the patient. On the other hand, Fry in the British Medical Journal in 1954 reviewed the problem and he felt, at least in Great Britain, that climate and atmosphere, particularly the industrial atmosphere, were of prime importance. Phillips in the August issue of the Annals of Internal Medicine, 1956, reported the study of 974 patients who lived and worked in an industrial section of West Virginia and whose work kept them much exposed to gases, fumes, silica, etc., as well as great tempera-

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ture changes. He found only 31% of these had cough and bronchitis. They in turn were compared to a group of 300 veterans in the New England states coming from rural and small urban vicinities where there were no adverse conditions in the atmosphere. All these smoked, however, and Phillips found that 44% had cough and bronchitis. Therefore, he concluded that cigarettes were the greatest cause of this disease. Another report in the New England Journal of Medicine in January 1956 rated smoking as the most important factor in bronchitis. Just to make it interesting, however, Finke, reporting in the Journal of the American Medical Association in 1953, felt that infection was by far the most important cause of bronchitis. He carefully followed 100 children from Rochester, New York, and obviously none of them were smokers. These children had repeated respiratory infections, were underweight, under par, and suffered with chronic recurrent bronchitis. With much more vigorous treatment than was usually given he felt that striking improvement was obtained and that a definite change in the usual course of the disease was accomplished. It is apparent that you can find articles emphasizing either infection, irritation or allergy as the primary cause. Basically, I think all factors are important and I firmly believe that we have to look at this from every angle.

Regarding the treatment of such disease, I think the first thing one should do is to try to eliminate the offending substances, whether it be smoke, industrial air pollution, house dust, allergic factors, or infection. A great deal of attention must be paid, I think, to the relief of the cough. On the other hand, we must remember a cough is a physiologic and protective affair and it is not wise to try to abolish it completely. Constant cough, however, is irritating and obviously disturbing to sleep and rest. Codeine is still the drug of choice when properly used. We would certainly advise vigorous attack upon any infection by the use of antibiotics, and, as pointed out by Finke, the usual two to three day treatment is not sufficient. These patients should be treated for at least two weeks or longer if necessary. Adequate drainage is highly important. I think that all agree that steam and wetting agents are extremely helpful, particularly in the dry winter months. From time immemorial potassium iodide and ammonium chloride have been used to liquefy the sputum. For the relief of spasm of the bronchi, which so frequently accompanies inflammation, we use aminophylline or ephedrine or combinations of the two. Postural drainage is helpful in bronchitis as well as in bronchiectasis. Climate is certainly important and in general I think that a uniformly mild temperature is highly desirable. If this can be combined with a comparatively dry climate the results are usually good, although I should like to emphasize that each person must be treated as an individual and it is never wise to urge one to make a definite geographical change without adequate trial of a temporary nature. Finally, of course, the use of autogenous vaccines and desensitization therapy may be the key to success. Once again I would like to emphasize that bronchitis *per se,* at least in this country, is not a serious disease. It does, however, tend to be recurrent, often chronic, and not infrequently leads to complications such as pneumonia, atelectasis, peribronchitis, bronchiectasis, and emphysema.

Emphysema, to my mind, is one of the most neglected and discouraging of all of the diseases and yet one which we have to face. I am referring to the so-called chronic obstructive emphysema, not the senile or postural type which usually can be ignored. The actual cause of emphysema is again basically unknown. It certainly is most common in males of age 45 or over, frequently in those with a history of asthma, and more frequently in those who have had bronchitis for years. Like so many diseases it is insidious in onset, slowly progressive over a period of years, and unfortunately may go on to the point of total incapacity. It is rarely treated vigorously until the later stages are noted when it is really too late to accomplish much.

The fundamental lesion in emphysema is probably obstruction to the smaller air channels, which is followed by loss of elasticity and rupture of the alveolar spaces. On physical examination the usual findings are increased PA diameter of the chest or barrel chest with expansion rather limited and diaphragmatic movements poor. The ribs tend to be held in a high position and are wide apart. Breath sounds are faint and rhonchi may or may not be present. At autopsy the lungs are found to be voluminous and do not collapse. The capillaries are narrowed, the alveolar spaces are ruptured and the capillary bed is decreased. Pulmonary arteries are frequently sclerosed. Clinically we may see, before death, as a complication in the far advanced cases, cor pulmonale with heart failure, and also occasionally hypertrophy of the left ventricle due to unknown causes. X-rays of the chest show increased translucency and occasionally bullae. From the

functional standpoint, in addition to the loss of elasticity, there is definite increase of lung volume and increase of residual air, prolongation of expiration, and decreased maximum breathing capacity. Vital capacity may not be very much decreased, but the amount one can expire in a given limit of time, say three seconds, is markedly decreased. In the later stages we may notice laboratory findings of increased hemoglobin of 17 gm. to 20 gm., or red counts above six million.

Occasionally the earlier stages are difficult to diagnose. When in doubt we should turn to our friends the pulmonary physiologists and their laboratory for diagnostic study and help. In general, however, a history of chronic cough, slowly increasing shortness of breath, and occasional slight wheeze is enough to make the diagnosis.

Unfortunately, there is no simple, effective, easy therapy of this disease. Neverthless, we have to face the problem as we do in many other diseases without adequate treatment. Too often the early signs are ignored or glossed over. It should be clearly understood by both the patient and the physician that once it is well developed it is impossible to return the lung to normal. Ordinarily in good health we have considerable pulmonary reserve so that even if we lose a certain amount of this reserve we still can lead an active and useful life. It is, therefore, imperative that therapy should be instituted before this reserve is too markedly diminished. Too often, "the barn is locked after the horse is stolen."

I am not sure of the exact role of tobacco in carcinoma of the lung nor even in bronchitis as we have just discussed. Certainly, however, one who has bronchitis should stop smoking and one who develops the earliest signs or evidence of emphysema should stop tobacco smoking in any or all forms. Shifting to filtered cigarettes, pipes, cigars, etc., will not help. We at Duke have been convinced of the importance of this for at least the past ten years. I must confess that I thought this was well recognized and accepted in most parts of the country. I was somewhat surprised to see in the August 1956 issue of the Annals of Internal Medicine an article calling attention to evidence which the authors felt definitely proved that smoking was a major cause of emphysema. We have repeatedly stated during the past ten years that allowing a patient with early emphysema to smoke was like telling a patient with early cirrhosis to go right ahead and drink. I know how difficult it is for both the patient and physician to take a firm stand. I have gone through this entire situation personally, as well as professionally. There is no easy way for the doctor or the patient. We bluntly tell our patients, "make up your mind whether you would rather smoke or breathe."

Therapy should certainly take into consideration the treatment of asthma if it is present. If bronchitis is the underlying cause, as it so frequently is, it should be vigorously treated. We should get the patient to avoid other irritants as well as tobacco. We believe mild physical exercise in order to keep the muscles toned up and the general condition of the body good is desirable, but at the same time we feel that the patient should avoid the degree of exercise that causes severe dyspnea. The so-called emphysema belts have frequently been advocated, but they are uncomfortable and rarely of any help. Climate is important also for the patient with emphysema but once again it should be pointed out that this is an individual affair and what suits one will not necessarily agree with another. In general, these patients should live at altitudes of no more than 3,000 feet in a temperate zone, preferably rather dry. Pneumoperitoneum has been advocated by some in an effort to raise the diaphragms and make for better diaphragmatic excursions. We have had only limited experience with this but have not been particularly favorably impressed. We do believe that breathing exercises are quite helpful and we use these routinely. We also think that aerosol therapy is helpful, in the form of Isuprel and Alevaire in combination. Occasionally these are used with hand atomizers but in general the power pumps such as put out by the DeVilbiss Company, or tanks of compressed air or oxygen are preferable. In the past few years intermittent positive pressure breathing, such as obtained by either the Bennett or M.S.A. valves have proven beneficial and helpful. However, such treatments must be carried on several times a day over a period of months. Ephedrine by mouth or aminophylline per rectum is helpful, particularly if there is any evidence of spasm of the bronchi. Again potassium iodides and other expectorants may be used.

It is our impression that with any upper respiratory infections antibiotics should be used and used vigorously, and for an adequate period. Steroids are frequently employed, and we used prednisone and prednisolone and we have found them particularly helpful if there is much bronchial spasm. In other patients, however, they are frequently disappointing. I should inject a word of caution here

in that once a patient starts on steroids he is rarely able to stop them and, as you well know, there are occasionally complications due to the drug itself, not to mention the expense. In the advanced stages when cardiac failure takes place, digitalization, low sodium diets, and diuretics are all indicated. Oxygen given by a mask is of great subjective relief. We do not hesitate to use it when it is really needed but I must say that it is rather easy for patients to become addicted to oxygen and get completely dependent on it and unable to get along without it, which ends up as an expensive and prolonged form of symptomatic therapy. Also with oxygen use, carbon dioxide narcosis may occur, especially if sedatives are used.

In brief, the disease must be recognized early and treated vigorously with all the weapons at our command, for if an all out effort is not made we can expect poor results with the possible eventual development of a pulmonary cripple.

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Campaign Against Accidental Poisoning

Medical and nonmedical people have banded together in a new all-out war against accidental poisoning, which has killed some 15,000 Americans, including 5,000 children in the past decade. The latest developments in the intensive campaign were outlined in a special article in the January 12 Journal of the American Medical Association.

Much progress has already been made in the fight to reduce accidental poisoning. Ten years ago it was estimated that every day over 850 persons became ill and six persons died from eating or drinking some poisonous agent. Today the rate is 425 nonfatal and three fatal cases of poisoning every day. This reduction has occurred in spite of a growing population and a growing number of new potentially harmful household items and drugs, mainly because of the intensive efforts of many medical and nonmedical groups.

Examples of the efforts of various groups listed in the article include the Boy Scouts of Troop 99 in Montclair, N.J., making door-to-door calls on 1,000 families to warn of the dangers in home medicine chests, and the Milwaukee Junior Chamber of Commerce sponsoring a "Poison Day" when they handed out warning leaflets in shops and on street corners.

Medicine's contribution has been the formation of poison control centers, which are set up in medical schools and hospitals as a source for emergency information. A doctor receiving a call about an accidental poisoning can contact the center, give the name of the poisoning agent and find out if it is harmful and what treatment is necessary. Since November, 1953, when the first center was set up in Chicago, centers have been set up in 35 other U.S. cities. New ones are being formed at the rate of nearly two a month and Canada's first two poison centers were scheduled to go into operation this month.

New efforts to reduce further the number of poisonings include:

—A nationwide newspaper advertising campaign emphasizing poison hazards at home which will be launched this month by the National Safety Council, the National Advertising Council and the Proprietary Association (of over-the-counter drug wholesalers).

—A meeting soon in Washington, D.C., of the nation's top medical experts on poisoning, public health officials and interested lay authorities to establish a clearinghouse for exchange of vital information from the various poison control centers.

—The A.M.A.'s Committee on Toxicology's current work on a model law to require labeling of the many household chemicals that do not list potentially harmful ingredients.

—A study of treatment for poisoning by kerosene, one of the "toughest poisons to counteract." The American Academy of Pediatrics, A.M.A., the American Public Health Association, major medical centers and schools, and medical advisors for the petroleum industry are cooperating.

—The recent establishment by the A.M.A. of a permanent subcommittee with the mission of improving public education in chemical poisons.

Metastatic Breast Cancer

Hormonal Manipulation in the Palliative Treatment

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BREAST MALIGNANCIES rank second to gastrointestinal carcinoma and are equal to uterine cancer as a leading causative factor in the death of women who have neoplastic disease. Most authorities agree that prior to clinical manifestations of metastases the initial treatment is radical mastectomy followed by irradiation therapy.

However, despite these procedures, the majority of women with mammary carcinoma develop dissemination of the disease process. When dissemination has occurred, palliative measures become the only choice of treatment. It is well known that the mammary glands are under direct influence of endogencus hormones and that some tumors arising within these glands also are dependent upon these hormones. Therefore, it is conceivable that by the interruption of the hormonal balance it may be possible to alter the growth of these neoplastic diseases.

It is the purpose of this paper to evaluate these palliative endocrine treatments and to ascertain the sequence of therapy which will best produce prolongation of a useful life.

ESTROGENS

In 1944, Haddow and others[1] first reported on the use of synthetic estrogens in the treatment of carcinoma of the breast, bladder, rectum, skin and testes. In 1949, Adair et al., reported on the clinical results obtained following the administration of estrogens to 35 patients who were in the sixth to eighth decades of life and who were 2 to 29 years postmenopausal. Favorable objective response, as noted by improvement of radiographic changes in the osseous metastases, such as calcification of osteolytic lesions, reformation of bone, healing of pathologic fractures, decrease in skin lesions, healing of ulcers and no increase in the number of metastatic lesions, was observed in some of the patients. Twenty-three per cent of the patients with soft tissue involvement of the skin, lymph nodes, breast and pleurae had objective improvement. However, estrogens had little if any effect upon the bone lesions. This objective improvement lasted 2-17 months and continued in 50 per cent of the patients for 7 months or longer.[1]

Subjective improvement was also noted in this group of patients as shown in Table I.

TABLE I[1]

Symptom	No. of Patients with Symptoms	No. of Patients with Subjective Improvement
Pain	18	11
Dyspnea	16	8
Anorexia	10	7
General Malaise	9	3
Nausea	2	0
Cough	1	0
Headache	1	1

Prior to treatment, 25 per cent of these patients' physical conditions made it almost impossible for them to work or care for themselves. However, following treatment, the majority of these patients were able to carry on their normal physical activities.[1]

TABLE II[2]

REMISSIONS INDUCED BY ESTROGENS

Estrogens	No. of Cases	Objective Remissions	Duration	
			Mean	Median
			(Mo.)	(Mo.)
Postmenopausal (Stilbesterol 15 mg/ day or ethinylestradiol 3 mgm/ day)	76	32%	13.5	8

Recently, the combined results of several clinics have shown that estrogen administration induced objective remissions in 44 per cent of postmenopausal women with breast cancer. Average duration of these remissions was 8 months with a mean of 4.5 months. It has been well established that estrogens, however, are capable of accelerating the growth of mammary carcinomas.[3]

Nathanson demonstrated an estrogenic therapeutic effect in postmenopausal women with advanced and

metastatic mammary carcinoma. Following this, estrogens have been used in large series of cases and reports indicate that in 40-60 per cent of the cases treated there was some degree of subjective improvement. With soft tissue lesions approximately 50 per cent of the patients treated had objective improvement; with osseous lesions about 20 per cent were objectively improved; and in patients with pulmonary lesions there was a 20-40 per cent regression of lesions as shown by x-ray evidence.[4]

How estrogens induce remissions in women with mammary cancer is not well understood; however, it is possible that beneficial results are obtained by the suppression of pituitary function by the use of estrogenic substances.[5] It is thought that some breast cancers are dependent upon several hormones (estrogens and growth hormones), and it is probable that estrogenic substances may have a dual action upon cancerous disease—one causing growth, the other causing retardation, of which either effect may predominate.[3]

Estrogens are more effective in the palliative treatment of primary lesions and soft tissue metastases, but osseous lesions often respond favorably. It is generally agreed that estrogens should be given to women only when they are at least five years postmenopausal (spontaneous or induced) as there is a 1:5 chance of increasing the rate of tumor growth in younger women.[4]

Since estrogenic response is quite variable and unpredictable, causing in some instances regression, retardation and progression of the lesions and discrepancy between subjective and objective improvement[4], it would appear wise to restrict the use of estrogenic compounds to those patients who fail to respond to oophorectomy or to oophorectomy and adrenalectomy.[3]

ANDROGENS

In 1939, Ulrich and Loeser focused attention on the possible usefulness of androgens in the treatment of breast cancers in women. Farrow and Woodward in 1942 obtained subjective, but no objective, improvements in 50 per cent of 33 patients who were on androgens. Fels in 1944 noticed that in one of his cases, a 34 year old woman, a decrease in the size of supraclavicular lymph nodes, an increase in calcification and a decrease in the size of osseous metastases followed testosterone therapy. Adair and Herrman in 1946 noticed objective improvement in 4 of 11 patients treated with testosterone.[1]

In 1949, Adair et al., reported on 70 cases who had received testosterone propionate 100 mg. intramuscularly three times a week for periods of one month or longer. Objective improvements (criteria as noted under estrogens) was obtained in 19 per cent of 48 cases which had bony metastases. No change was noted in 23 per cent, while 39 per cent had unaltered progression of their disease process. Objective improvement was noted in 15 per cent of 54 cases that had soft tissue metastases. No change in 26 per cent while 48 per cent had unaltered progression. This objective improvement extended from 2 to 11 months and continued in approximately 50 per cent of the cases for 4 months or longer. Final data revealed that 17 per cent of premenopausal patients received objective improvement as compared to 22 per cent of postmenopausal cases.[1]

Symptomatic improvement was noted in most of the cases as shown in Table III. The most impressive effect was on pain. It is interesting to note that even though subjective improvement was obtained, the disease process was progressive. All patients prior to treatment were in such poor physical condition that over half of them were unable to work or take care of themselves. However, following treatment, the majority of the incapacitated were able to seek employment or carry on normal physical activity.[1]

TABLE III[1]

Initial Symptoms and Incidence of Symptomatic Improvement in 70 Patients Receiving Androgens

Symptom	No. of Patients with Symptoms	No. of Patients with Subjective Improvement
Pain	58	44
Anorexia	29	21
General Malaise	24	20
Dyspnea	24	20
Nausea	8	6
Cough	3	1
Headache	3	3

Androgens for some time have been widely used mainly as palliative agents in women with advanced breast cancer with metastases. Age is not an important determining factor in the selection of appropriate patients, because androgens produce favorable results at any stage of life. What is more important is the site of the disease. Androgen therapy appears to be most effective in patients with osseous metastases. Symptomatic improvement may appear in 2-4 weeks with pain alleviation, increase in appetite, weight and rehabilitation. Duration of these responses is variable, but there is usually a recurrence of symptoms and signs within a year

in the majority of cases. Considerable discrepancy has been noted between subjective and objective improvement in response to androgen therapy.[6] Androgen therapy will produce objective improvement in approximately 23 per cent of women with mammary carcinoma in all age groups either pre- or postmenopausal.[3] Approximately 50 per cent of the pre- or postmenopausal women treated with testosterone will show subjective improvement and about 20 per cent of the premenopausal and 40 per cent of the postmenopausal patients will show some primary tumor regression. Osseous metastases tend to regress in 10 per cent of cases.[4] However, some patients show excellent symptomatic relief even in the presence of steady progression or acceleration of osseous disease.[6] Most authorities agree that androgens can be given at any age and they seem to be more effective in the control of bony lesions than with soft tissue tumors.[4]

How androgens produce remissions is not well known; however, it is thought that androgens have a neutralizing effect on endogenous estrogen. If this is the true mode of androgen action, then this mechanism is a poor one since approximately 50 per cent of breast cancers are dependent upon estrogen, and androgens are effective in only one half of the cases. However, androgens, like estrogens, are capable of increasing breast cancer growth in some patients[7], and recent data obtained indicates that androgens can be converted to estrogens.[8] If this is true, then this might explain why androgens are effective in only one half of the 50 per cent of estrogenic dependent cancers, and androgens have the potential danger of accelerating the growth of the carcinoma. It, therefore, seems wise to reserve androgen therapy until there is exacerbation following oophorectomy, adrenalectomy or hypophysectomy.[3]

Table IV[2]
Remissions Induced by Androgens

Androgens	No. of Cases	Objective Remissions	Duration	
			Mean	Median
			(Mo.)	(Mo.)
Premenopausal (Testosterone propionate 100 mg 3 x/ week).....	54	13%	10	4
Postmenopausal (Same Rx.)....	113	20%	8	8

CORTISONE

Medical adrenalectomies have been attempted by prescribing cortisone in doses of 200-400 mgms. orally per day in hopes of producing adrenal suppression, either directly on the adrenal or via the pituitary mechanism.[4] Cortisone in these doses has produced symptomatic and objective improvement in 9 of 21 women with advanced carcinoma of the breast. Subjective improvement was noted in 6 of the 21 patients without objective change in the neo-plastic growth. The remissions were short with an average of approximately 3 months. Objective improvement consisted of subsidences of hypercalcemia and hypercalciuria in cases with osteolytic tumors, calcification of osteolytic lesions as noted by x-ray, shrinkage of the marked hepatomegaly and regression of cutaneous lymph nodes and pulmonary metastases. Subjective improvement was noted by relief of pain, appetite improvement, gain in strength, and a state of euphoria.[9]

It has been observed that cortisone is capable of inducing remission with either estrogen or non-estrogen dependent breast carcinomas. How cortisone brings about this response is unknown. However, it is thought that there might be a direct effect of cortisone on the neoplasm. Knowing that the remissions induced by cortisone are of short duration, it appears wise to withhold this form of therapy for those patients who fail to respond to the other forms of endocrine therapy or for those who have relapsed after such therapy. It has been concluded that cortisone is useful in the critically ill patient and if remission is obtained in these patients by the use of cortisone, the patient may then after a period of time be more suitable for other modalities of endocrine treatment.[3]

Table V[2]
Remissions Induced By Cortisone

Cortisone	No. of Cases	Objective Remissions	Duration	
			Mean	Median
			(Mo.)	(Mo.)
All ages—200-400 mgm./ day....	39	31%	3	..
All ages—50-75 mg.....	14	14%	..	..

ADRENALECTOMY AND OOPHORECTOMY

It has been shown that the adrenal glands are important in the regulation of some mammary carcinomas[6], and the rationale for bilateral adrenalec-

tomy is based upon the clinical and experimental evidence that the adrenals are involved in neoplastic tissue growth.[10] The 17 keto-steroid excretion in the urine of animals and humans has served as an indication of hormonal activity. Premenopausal or normal human females excrete 60-40 international units; postmenopausal women excrete 40-30 international units; bilateral oophorectomized individuals excrete 30-10 units; and those individuals who have undergone bilateral adrenalectomy following oophorectomy will excrete 0 units.[11]

Huggins and Scott performed numerous bilateral adrenalectomies during 1942-1944 on patients with neoplastic growth who had relapsed following a good response to castration or estrogen therapy. However, adequate adrenal replacement therapy was not available, and such procedures were discontinued due to Addisonian crisis and other complications until 1951 when Thorn and his associates succeeded in maintaining life following adrenalectomy by the use of DOCA and cortisone acetate.[12]

Following this, Huggins performed the first bilateral adrenalectomy and oophorectomy for recurrent cancer of the breast.[11] In 1953, Huggins and Dao[13] reported on 50 patients treated by adrenalectomy for advanced breast cancer and gave the following conclusions:

"1) The ovary is strongly implicated in the maintenance of mammary cancer in the human female. The relative function of each of the ovarian hormones is not well understood.

"2) The widespread use of estrogen has not appreciably increased breast cancer.

"3) The involution of mammary carcinoma after oophorectomy is clearly due to removal of ovarian hormones produced by the ovary, and the most plausible explanation of beneficial effects of adrenalectomy is elimination of hormones of similar nature.

"4) The excretion of estrogen in urine of women who have undergone oophorectomy is abolished by adrenalectomy.

"5) The microscopic appearance of the neoplasm is frequently of value as a first approximation in differentiating between dependent and nonresponsive cancers.

"6) Most mammary cancers, predominantly papillary neoplasms or adenocarcinomas, regressed after these surgical procedures. Duct carcinomas rarely and undifferentiated mammary cancers never respond favorably.

"7) High titer values of estrogenic substances in the urine in the absence of gonadal function indicate adrenal cortical activity of significance in mammary carcinoma."[12]

Huggins and Dao[13] also reported on 14 patients who were observed from 1 to 2 years following adrenalectomy or combined adrenalectomy and oophorectomy. Six of these patients died; one was living but showed no response. Seven patients were in remission, two of which had only undergone adrenalectomy, while the other five had the combined procedure. All appeared in good health and had a weight gain of 10-20 Kg. They also had a decrease or disappearance of pain, stabilization or healing of osseous lesions, disappearance of pleural effusion and regression or healing of recurrent lesions in postmastectomy scars. All of these patients suffered from postmenopausal type of hot flashes, and this was regarded as a useful favorable prognostic sign.

Kennedy reported in his series that approximately 40 per cent of the patients treated by adrenalectomy showed objective improvement. Castration, however, had previously been performed in these patients. Data obtained indicated that those patients who had objective improvement following oophorectomy had similar response following adrenalectomy.[6]

Huggins et al.,[13] and Pearson, et al.,[14] have demonstrated that adrenalectomy will induce objective improvement in some patients with advanced cancer of the breast. Huggins demonstrated that after favorable responses are no longer obtained with hormonal therapy, additional temporary remissions may be obtained following adrenalectomy and oophorectomy in selected patients. The purpose of these procedures was an attempt to remove all major endogenous sources of estrogens.[15] Since it is known that the adrenals produce estrogens, it is of interest to consider whether adrenalectomy would bring about favorable response.[13] Objective remissions averaging 9 months were noted in 45 per cent of 38 women with metastatic breast cancer, all of whom had previously undergone oophorectomy. Therefore, adrenalectomy produced beneficial results by the removal of another estrogen source. Results from this series indicated that patients who benefited from castration are likely to respond favorably to adrenalectomy, and those patients who failed to respond to oophorectomy would most likely fail to respond to adrenalectomy. Therefore, knowledge of favorable response to oophorectomy provides a good means for selecting patients for adrenalectomy.[3] However, West et al.,[9] followed a group of 9 patients who failed to respond or had relapsed following castration or steroid therapy. Adrenalectomy performed in this group produced objective improvement consisting of

ossification of skeletal lesions and shrinkage of soft tissue lesions in three of the patients.

In 31 cases followed by Rukes et al.,[4] there was striking improvement to complete disappearance of skeletal pain almost immediately following bilateral adrenalectomy and oophorectomy. This response persisted for many months in practically all cases, while objective improvement was noted in 22 per cent of the cases.

Total adrenalectomy, with or without oophorectomy, was performed by Eddy upon 8 patients, 7 of which were operated upon prior to January, 1954. The results of this group of 7 patients were obtained after at least one year's observation. Two of the patients are now dead and they showed no response. Four had extremely good results and are living normal lives. One improved only moderately well, leading a somewhat restricted but painless life.[11]

In 25 women, oophorectomy and adrenalectomy done in a one stage procedure produced objective responses in 16 cases with an average duration of the remissions exceeding 8 months.[16] Fifteen of these 25 patients had normal physiological menopause; four had induced menopause; and the remaining six were premenopausal. Such observations suggest that about 50 per cent of the cases have estrogen dependent breast cancers, regardless of age, and that they will have favorable response by removal of all the endogenous estrogenic sources. Combined adrenalectomy and oophorectomy appear to be the recommended initial treatment in mammary carcinoma of postmenopausal women. However, there is no definite criteria in determining which patients will have a favorable response.[3]

Galante et al.,[15] observed 50 patients who received bilateral adrenalectomy and oophorectomy and noted objective improvement in the metastatic lesions of 16 patients and subjective improvement in 21 patients. His group also observed that subjective improvement was more pronounced and longer lasting following surgical adrenalectomy than medical adrenalectomy.

In a series of 22 patients in which bilateral adrenalectomy was performed, subjective improvement was noted in 12 of 16 cases followed long enough for evaluation. However, there was objective improvement in only 4 of the 16 cases as shown by evidence of inhibition of tumor growth. What is of great interest is the fact that there was progression of the disease by objective criteria even though there was marked subjective improvement.[10]

Adrenalectomy has a place in the palliative treatment of advanced breast cancers especially when other conservative measures have failed. At present, there is no sure method that will give definite proof as to which patients will or will not respond favorably to adrenalectomy. However, enough data has been tabulated to prove that approximately 50 per cent of the patients with advanced mammary carcinoma may benefit either subjectively or objectively.[3] As yet, it has not been proven that adrenalectomy produces a cure. However, if mammary carcinoma is treated early enough and if adrenalectomy is used as a preventive procedure, it may be possible that the recurrence or relapse rate may be reduced considerably.

HYPOPHYSECTOMY

The most recent approach to hormonal manipulation for palliative treatment in metastatic breast cancer is by total hypophysectomy. This procedure was first performed due to the concept that certain neoplastic growths might be dependent upon hormones of the pituitary in addition to dependence upon estrogens. Since the growth of breast and prostate cancer can be altered by changes in the hormonal environment, these tumors become of special interest.[17] Hypophysectomy not only eliminates hormones of the pituitary, but it also produces extreme suppression of thyroid, ovarian and adrenal function, which is comparable to surgical removal of these glands.[3]

In October, 1952, Luft and Olivercrona[18] reported on a series of 26 cases in which hypophysectomy was performed, nine of which had far advanced carcinoma of the breast. Most of these 9 cases had huge recurrences after previous mastectomies, and some had pulmonary and other metastatic lesions. Two of these cases had previously undergone surgical removal of metastatic cerebellar lesions. All of these patients did well following hypophysectomy. However, it was at that time too early to draw conclusions as to whether there was complete removal of the pituitary and whether there was going to be favorable reactions concerning the cancerous growth. However, one patient had excellent results as cited below.

"One of these patients with carcinoma of the breast was a woman age 49. In 1945 the left breast was removed. She did well until 1948, when recurrence in the skin was observed. X-ray treatment was given with good effects; in addition she was castrated by irradiation. Later in 1948, new metastatic tumors appeared in the skin; treatment with testosterone was now given with some temporary effect. In September, 1949, a cancer of the right breast

developed. Treatment with radioactive phosphorus had some temporary effect, followed by a rather rapid progression. At examination in January, 1952, her general condition was comparatively good, considering the enormous ulcerating cancer (over entire surface of the anterior chest). No bone or pulmonary metastases were found.

Hypophysectomy was performed on January 29, 1952. There was very little immediate reaction, except for frequent rises of temperature probably caused by resorbtion from the large ulcerating cancer.

About a month after operation small islands of epithelium appeared here and there on the ulcerating surface. After that there was a more rapid improvement. . . . Eight months after operation the entire ulceration was covered with epithelium, and the subcutaneous cancer encasing the thorax had largely disappeared. Biopsies made at intervals of 2-3 months from January to September, 1952, showed a striking change in the histological appearance of the tumor. The general condition of the patient has improved. She is feeling well and is able to do all her housework. All tests indicate that hypophysectomy was complete."

Pearson et al.,[19] reported on a woman with metastatic carcinoma of the breast who had previously been oophorectomized, adrenalectomized and had androgen therapy but who then had a relapse. Objective improvement following hypophysectomy was noted for six months. "Administration of somatropin for 18 days apparently accelerated the growth of osseous metastases which subsided when the somatropin was withdrawn. The data suggests that pituitary somatropin is an important factor for mammary carcinoma."

Pearson et al.,[17] reported on a series of 79 cases in which hypophysectomy was performed due to far advanced malignant disease. These cases covered a three year period from March, 1952 to March, 1955. Fifty-eight of these cases had breast carcinoma, of which only 41 could be evaluated. Twenty-one cases showed objective improvement as noted by regression of the primary inoperable lesions, bone, bone marrow, pulmonary, pleural, intracranial, spinal cord, lymph node and skin metastases. Twenty cases failed to respond. Of the 21 which had favorable responses, eleven had previously undergone oophorectomy and adrenalectomy, ten of whom had improvement from either one or both procedures. Five of these 11 patients had further objective remissions following hypophysectomy. Only one failed to respond to all three procedures.

Table VI[17]
Effect of Hypophysectomy on Neoplastic Disease

Breast Cancer	No. of Cases	No Response	Objective Remissions
Evaluated.....	41	20	21
*Evaluation Impossible.....	15	..	..
Recent Surgery....	2	..	..

*Impossible to evaluate the effects of hypophysectomy due to operative deaths, grossly incomplete hypophysectomy and death from cancer too soon postoperatively.

Pearson et al.,[17] noted that in 24 patients who were hypophysectomized as the initial ablative treatment, fifteen had obtained objective improvement. Eight are still in remission, while the remaining six have had relapses.

Luft and Olivecrona[20] reported that they had up until February, 1954, performed hypophysectomies on 37 cases of metastatic mammary carcinoma. Only thirty of these cases could be evaluated because seven cases either had incomplete hypophysectomy as shown by autopsy or had died from other diseases shortly after operation. Fourteen of these 30 cases were still alive as of June, 1954, while the remaining 16 have died. Eight died within 3 months following operation, seven within 10 months and one after 10 months. The factor responsible for 14 of these deaths was progression of the malignant process. One of the remaining two died of adrenal crisis, while the other one died of an unknown cause.

Seven of the remaining 30 patients had extensive brain and liver metastases at the time of operation. The operation failed to alter the disease in six of these patients, and they died within 4 months following hypophysectomy. Therefore, this actually left only 23 patients in whom evaluation could be made.

The following results were observed in regard to pain following hypophysectomy. Ten of the surviving patients had pain prior to operation. Following operation, pain disappeared in eight, reduced in one and remained unchanged in the other. Fourteen of the nonsurviving patients had pain prior to operation. Pain disappeared in only one of these, while it was markedly reduced in three, and showed only slight decrease in six.

There was marked improvement of the metastatic lesions in the local tissue and regional lymph nodes following hypophysectomy. All except one of the surviving patients had improvement as noted by decrease in the size of the lesions. Two of the

nonsurviving also received marked objective improvement.

Hypophysectomy had excellent effect on lung metastases and pleural exudates as noted in the surviving group. One patient prior to operation had metastases covering most of the lung fields. Last x-rays showed no evidence of metastatic lesions. In five other cases there was marked decrease of metastatic lung lesions in four, while one failed to show any improvement. Pleural exudates observed in two prior to operation showed a decrease in only one postoperatively. No appreciable improvement was noted in the nonsurviving cases.

In evaluating the effects of hypophysectomy on bone metastases, it was difficult to appraise the effects accurately. Of 14 cases observed, nine had bone metastases prior to operation. No change was noted in six of these nine, while three showed increased density of the lesions. Of the five cases which did not have previous bone metastases, only one developed new metastases. However, all patients were free or almost free of pain.

As a result of this series of 37 patients, Luft and Olivecrona[20] have concluded that even though favorable response was obtained in a number of their hypophysectomized patients, it was too small a series to arrive at definite information about the type of cases which might respond favorably to this form of surgical procedure. They noted that women in or around the menopause seemed to respond better, while women older than 60 years of age failed to respond favorably. They noted that mammary carcinoma in the 60 year or older age group was less influenced by hormones. Also it was observed that good response was noted with the undifferentiated tumors as well as with differentiated tumors.

Pearson et al.,[16] summarized that hypophysectomy can be performed without great risk. They noted objective remissions in 21 of 41 patients who were hypophysectomized for advanced breast cancer. Evidence was presented that suggests that the growth of some breast cancers might be dependent upon hormones of the pituitary.

"A further period of observation is required to determine the average duration of hypophysectomy-induced remissions. If hypophysectomy can produce a summation of the beneficial results of oophorectomy, adrenalectomy and hypophysectomy performed in sequence, then this procedure may become the initial endocrine treatment for metastatic breast cancer."[3]

SUMMARY AND CONCLUSION

Estrogens are more effective in the palliative treatment of primary lesions and soft tissue metastases, but osseous lesions often respond favorably. Most authorities generally agree that estrogens should be given to women only when they are at least 5 years postmenopausal. As estrogenic response is quite variable and unpredictable, it would appear wise to restrict the use of estrogenic compounds to those patients who fail to respond to oophorectomy or to oophorectomy and adrenalectomy.

In the use of androgens age is not an important determining factor in the selection of appropriate patients. However, the site of the disease is more important since androgen therapy appears to be most effective in patients with osseous metastases. It appears wise to reserve androgen therapy until there is exacerbation following oophorectomy, adrenalectomy or hypophysectomy.

The remissions induced by cortisone are of short duration, but frequently quite dramatic, especially in the acutely ill patient. It seems wise to reserve this form of therapy for these patients in order to tide them over until other modes of treatment can be instituted.

Adrenalectomy and oophorectomy have a place in the palliative treatment of advanced breast cancers especially when other conservative measures have failed. There is no definite proof as to which patients will or will not respond favorably. However, data has shown that approximately 50 per cent of advanced breast cancer patients may benefit either subjectively or objectively.

As yet conclusive data on hyphophysectomy has not been obtained. Whether or not hyphophysectomy will produce a summation of favorable effects of oophorectomy, adrenalectomy and hypophysectomy remains to be proven. If this summation can be obtained, then hypophysectomy may become the initial approach in the treatment of metastatic breast carcinomas.

Table VII, compiled from the data of Pearson et al.,[3] summarizes the results of the various forms of endocrine therapy for metastatic breast cancer, and is in general agreement with the data obtained by other investigators.

Table VIII illustrates the recommended sequence of therapy for metastatic breast cancer as proposed by Pearson et al., and which appears to be in accordance with the opinions of other investigators.

The author wishes to thank Drs. John W. Powell and Louis A. Leone for their advice and guidance

TABLE VII

RESULTS OF ENDOCRINE TREATMENT OF METASTATIC BREAST CANCER

TREATMENT	Status	No. of Cases	Objective Remissions %	Duration Month	
				Mean	Median
Oophorectomy	Premenopausal	75	44	9	6.5
	Postmenopausal	21	10	..	....
Adrenalectomy	All previously (Oophorectomized)	38	45	9	7
Combined oophorectomy and adrenalectomy	Postmenopausal	25	64	(8)+	(8)+
Hypophysectomy*	All ages	37	54	?	?
Androgen (testosterone propionate 100 mg. 3 times a week)	All ages	416	23	7.5	4.5
Estrogen (diethylstilbestrol 15 mg./ day or etinyl estradiol 3mg/day)	Postmenopausal 5+ yr.	381	44	8	4.5
Cortisone:					
200-400 mg/day	All ages	39	31	3	3
50-75 mg/day	All ages	14	14	2	....

*Preliminary observations from a group of 58 patients in whom the results of hypophysectomy could be evaluated.

TABLE VIII

PREMENOPAUSAL PATIENT

1. OOPHORECTOMY

Remission	No Response
2. ADRENALECTOMY	2. CORTISONE
3. ANDROGEN	3. ESTROGEN
4. CORTISONE	4. HYPOPHYSECTOMY
5. HYPOPHYSECTOMY	

POSTMENOPAUSAL PATIENT

1. OOPHORECTOMY and ADRENALECTOMY

Remission	No Response
2. ANDROGEN	2. ESTROGEN
3. CORTISONE	3. CORTISONE
4. HYPOPHYSECTOMY	4. HYPOPHYSECTOMY

in the preparation of this paper, and Drs. Olof H. Pearson, Rolf Luft, and Herbert Olivecrona for the use of their reprints pertaining to this subject.

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The Memorial Hospital
Danville, Virginia

March of Medicine

Overwhelming response from physicians, churchmen, television writers and viewers has prompted March of Medicine to repeat its hour-long documentary on missionary medicine Tuesday, March 5, at 9:30 p.m. EST over the NBC-TV network.

This latest in the prize-winning TV series, produced and sponsored by Smith, Kline & French Laboratories in cooperation with the American Medical Association, is called "Monganga", tribal dialect for "White Doctor". Originally televised November 27, it brought a heavy flow of enthusiastic letters, telegrams, phone calls and personal messages—many asking to see the program again.

Among the nation's television critics, Jack Gould of the New York Times called Monganga "an absorbing hour-long documentary on the work of a missionary doctor in a remote village of the Belgian Congo". Jay Nelson Tuck of the New York Post felt that "beautiful photography, skillful editing and a script of simple directness combined to tell an inspiring story".

Writing for the Associated Press, Charles Mercer called Monganga "one of the most moving and absorbing documentaries in many months". Hal Humphrey in the Los Angeles Mirror-News described it as "a tremendous human interest story".

Monganga's November showing marked a significant "first" for this pioneering TV series. It was the first hour-long medical program ever presented coast-to-coast in compatible color and black-and-white.

The show chronicles the daily labors of one missionary, Dr. John Ross, as an "illustration of the work American doctors are doing for sick people all over the world".

In Dr. Ross' clinic, surgery is always preceded by a prayer. He is shown at his 14-hour day—overseeing a nearby leprosarium, conducting a weekly pre-natal clinic, traveling to distant "bush clinics".

His days not only include the diagnosis and treatment of diseases which face all physicians everywhere, but also the very special challenge of tropical medicine. Leprosy, yaws, elephantiasis and sleeping sickness are encountered daily. Primitive living and sanitary conditions must be improved—and often Doctor Ross turns field construction engineer.

"My job", Dr. Ross says simply, "is to lift these people up".

This dedicated man is a Kansan by birth who, as a minister, served congregations in California. At the age of 36—after the death of his first four children, two of them within 10 days—he decided to become a medical missionary. He graduated from the Indiana University School of Medicine and took graduate work at Tulane University. In 1950—by then 43 years old—he was assigned to the Disciples of Christ mission in the village of Lotumbe.

John Gunther, author of "Inside Africa", is the principal commentator for the program, providing background on Africa and on the work of the medical missionary.

March of Medicine was the first television series to receive an Albert Lasker Award for Medical Journalism. In the past, the series has focused on such topics as mental health, cancer, heart disease, arthritis, and new surgical techniques.

The Artificial Kidney

The Clinical Use of Hemodialysis

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E. LOVELL BECKER, M.D.
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A KOLFF TYPE "Artificial Kidney", or hemodialyzer[1] is now in operation at the Medical College of Virginia Hospitals. This is relatively large, but operates simply and is effective because of its large dialyzing surface. There are currently several other satisfactory machines in use, and although their appearances vary greatly, the fundamental process of dialysis across a cellophane membrane is common to all.

In the Kolff hemodialyzer (Fig. 1) blood is forced by arterial pressure through a flowmeter and then through a rotating coupling into cellophane tubing wound about a wire drum. The blood gravitates to the dependent portion of the coils and, because of its tendency to stay there, is moved from left to right by the rotation of the drum. It collects on the right side and is sucked out and pumped back into the patient by a non-traumatic pump. Heparin is used to prevent coagulation. The film of blood in the cellophane coil is exposed to a special bath solution and it is here, of course, that the process of dialysis occurs. An ordinary dialysis treatment lasts six hours, and with the usual blood flow of about 250 cc/min., one may anticipate that the blood urea will be lowered to about one-fourth or one-third of its initial value.

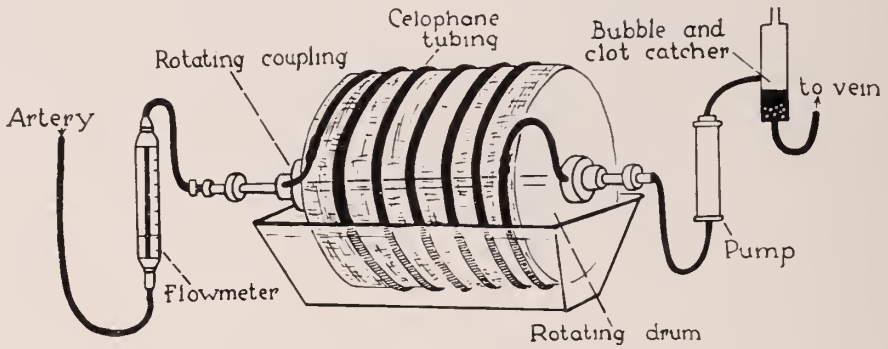


Fig. 1—Schematic diagram of Kolff-type hemodialyzer.

DANGER AND CONTRAINDICATIONS

Hemodialysis is a relatively safe procedure, but there are certain dangers to be considered. First, since the apparatus must be primed with about 700 cc. of bank blood before a run commences, there is the danger of blood transfusion. Complicating this factor is the speed with which this blood is administered—namely, in two or three minutes, so that if a reaction should occur, blood would have been infused before corrective measures could be instituted. Since the K^+ concentration of bank blood may be very high, it is wise in cases with critical hyperkalemia to pre-dialize the bank blood in order to lower the K^+ concentration. Of partciular importance in evaluating a patient for dialysis is consideration of the necessity of thorough heparinization. Thus patients with very fresh wounds, or active uncontrollable bleeding cannot be dialyzed without serious risk of hemorrhage. On the other hand, when there is a threat of hemorrhage from a wound several days old, or a history of bleeding from such a lesion as peptic ulcer, dialysis can proceed with caution. Hemorrhagic uremic colitis and other hemorrhagic uremic phenomena are usually of little consequence and do not result in serious bleeding. Bleeding following infusion of heparin is a possi-

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bility, but can usually be controlled by use of protamine sulfate.

INDICATIONS[2]

Whatever value hemodialysis has is limited to the value that can be obtained by a manipulation of blood chemistry and, to a much smaller extent, the manipulation of blood volume. The majority of acutely oliguric patients can now be managed without recourse to dialysis. When the diagnosis is established, the basic management is rigid fluid restriction and the provision of adequate calories to prevent undue tissue catabolism. In most instances such management is adequate to bring the patient through to a diuretic phase and eventually to recovery. However, in a considerable number of cases, after three to ten days and largely dependent on the rate of catabolism, the patient will develop laboratory and clinical uremia. Critical potassium intoxication may occur which will be suggested by weakness, poor respiratory motion, decreasing deep tendon reflexes and progressive ECG changes as well as elevation of serum K^+.

In such acutely oliguric patients, there is no doubt that dialysis is highly effective in correcting abnormal blood chemistry. Some patients will show clinical improvement during the six hour dialysis, but usually improvement is more obvious on the day after dialysis. By improvement is meant a marked elevation of cerebral function, relief of nausea with return of appetite, and improved muscle strength. Pulmonary congestion may also be relieved.

We have recently had the opportunity to observe a patient who remained oliguric twenty-five days and eventually went on to recovery. (Fig. 2)

The patient was a 72 year old male who developed mild hypotension secondary to bleeding after a transurethral prostatic resection. Following this he developed oliguria and by the third post operative day his blood urea nitrogen and creatinine had risen from normal levels to 100 mgm. per cent and 8 mgm. per cent respectively. Despite restriction of fluid and administration of 2000 calories per day, he did not develop diuresis but became progressively more drowsy, disoriented, and nauseated. The blood chemistry deteriorated. On the eighth oliguric day, dialysis was carried out for six hours with a blood flow of 225-250 cc/min. The patient showed slight improvement during dialysis becoming more lucid and responding to commands. Jerking and twitching movements disappeared and the deep tendon reflexes were markedly improved. The electrocardiogram showed progressive lowering of T waves as the serum potassium was lowered from 6.1 to 3.6 mEq. L. (Fig. 3)

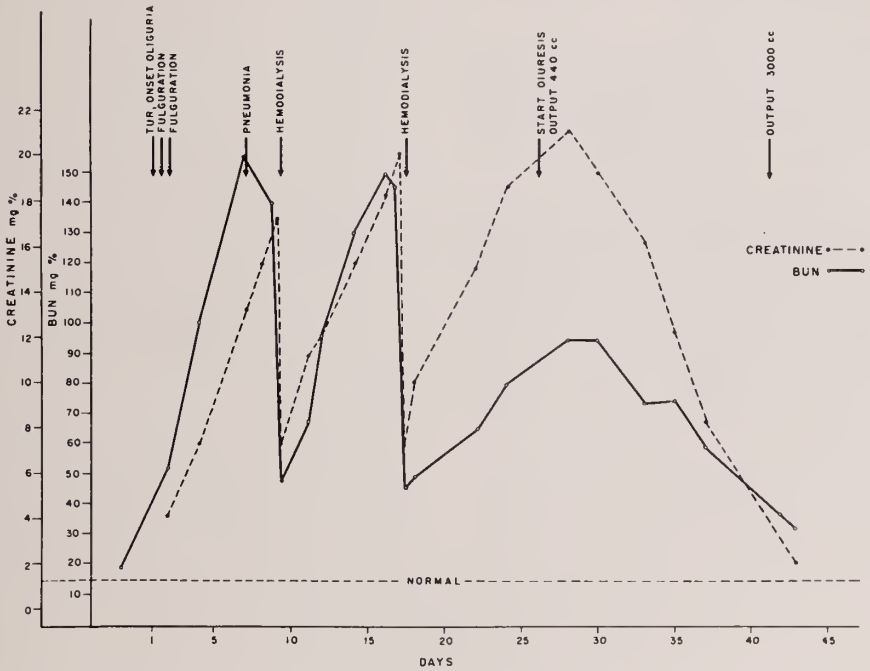


Fig. 2—Chart showing changes in BUN and creatinine levels during oliguria. Note output did not attain 400 cc. per day until the twenty-fifth oliguric day.

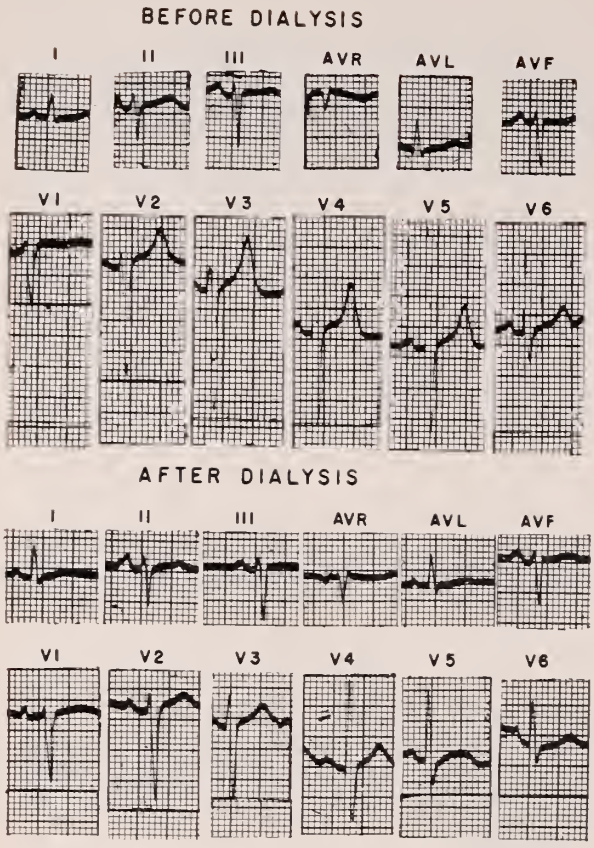


Fig. 3—The electrocardiograms recorded immediately before and after hemodialysis. The T waves are reduced concomitantly with decrease of serum potassium from 6.1 to 3.6 mEq. per L.

Other blood chemical changes occurring during dialysis are shown in Fig. 4.

Following this dialysis, the patient was markedly improved and able to accept oral feeding and medication. Nevertheless, urine output remained scanty (about 200 cc day), and again he began to deteriorate slowly. By the sixteenth oliguric day, it was necessary to repeat dialysis, which was done without incident. Improvement occurred, but the urine output continued low until the twenty-fifth oliguric day when the volume was 440 cc. in 24 hours. Twelve days later the volume had risen to 3000 cc. per day. A tendency to lower blood urea nitrogen level was not noted until thirty-two days after the renal injury. Eventually this man recovered adequate renal function and returned to work.

In this case dialysis was important in correcting blood chemistry and relieving symptomatology. Its value can hardly be questioned in oliguria as prolonged as this. However, in the usual less prolonged cases of acute renal failure, the use of dialysis should not loom so large as to obscure the critical importance of attention to fluid restriction and provision of calories.

There are a few patients who have chronic renal disease who may be candidates for dialysis.[3] These are primarily patients with chronic renal insufficiency who may have been thrown into decompensation by some intercurrent stress or an exacerbation of their renal disease. In such instances dialysis may provide the necessary time to reverse the newer factor and thus allow the patient to resume function at the old level. Occasionally patients with chronic renal

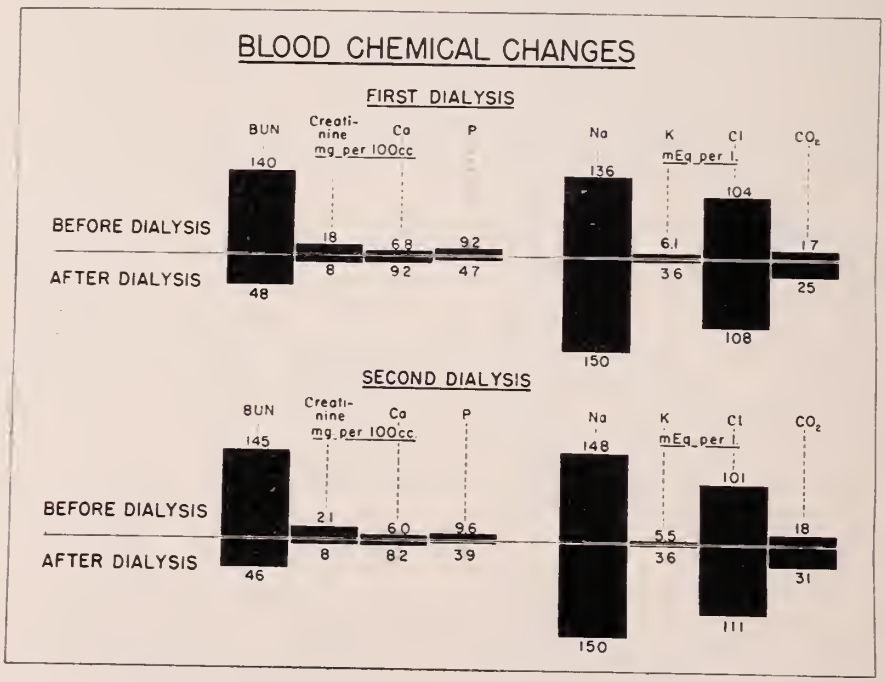


Fig. 4—Chart showing blood chemical changes before and after hemodialyses.

disease and nitrogen retention may require major surgery and such patients may undergo dialysis to attain ideal preparation for surgery. This approach is particularly well suited to patients whose renal difficulty may be relieved by surgical intervention.

tric care five days after dialysis. Figure 5 compares the rate of removal of phenobarbital by dialysis as compared to natural avenues of disposal. Analysis indicated approximately 3 gms. of barbiturate accumulated in the bath solution. Fortunately pheno-

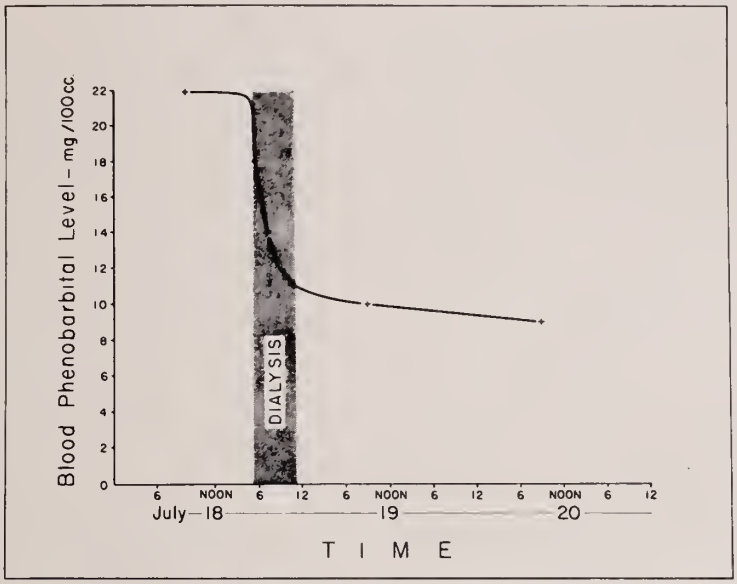


Fig. 5—Chart showing decrease in blood barbiturate level during dialysis and thereafter.

An entirely different group of patients who may benefit from hemodialysis are those intoxicated with diffusable poisons.[4,5,6] While there may be no gross alteration of renal function, the dialyzer is useful because of its ability to remove certain materials faster than the normal kidney can dispose of them. Among the materials which are effectively removed by dialysis are bromide, salicylate, and certain barbiturates.

We have recently treated a 40 year old female who ingested an unknown quantity of phenobarbital in a suicide attempt. On admission the patient was unresponsive to painful stimuli, but weak corneal and triceps reflexes were present. The reflexes disappeared in a few hours and evidence of bronchopneumonia appeared. A blood barbiturate level was reported as 22 mgm. per cent and the decision was made to proceed with dialysis. Four and one-half hours after starting dialysis, the patient was responding to painful stimuli and the knee jerks reappeared. At the end of dialysis, there was spontaneous moving and coughing. The next morning the patient was still drowsy, but able to converse. Chest x-ray showed slight bronchopneumonia which cleared quickly and the patient was discharged for psychiabarbital dialyzes much better than some of the other barbiturates which have more protein binding. In general, dialysis is most effective in the removal of the slower acting barbiturates.

Hemodialysis is particularly useful in severe salicylate intoxication where marked acid-base imbalance may be present. These patients can be quickly relieved of the salicylate ion while at the same time normal blood chemistry is restored.

While such cases as I have given may be dramatic, by no means will all these patients recover. Many patients who are treated by dialysis may not survive, but death can be attributed to the underlying disease in most cases. In our cases, dialysis has uniformly altered blood chemistry significantly in the direction of normal, and the patients have shown gratifying improvement. It is to be emphasized that whereas dialysis is a large undertaking, it has become effective and quite safe. Under these circumstances, when the proper indications exist, it is unwise to delay the procedure until the situation becomes critical and beyond repair. While dialysis does carry minimal risk, it can be depended upon to improve the patient's condition and simplify subsequent management.

SUMMARY

A Kolff type hemodialyzer is now in use at the Medical College of Virginia Hospitals. A description of the apparatus is given.

Hemodialysis involves the danger of rapid blood transfusion and is contraindicated when there is uncontrollable bleeding.

Hemodialysis is useful in certain cases of acute renal failure and occasionally in chronic renal disease. It is effective in alleviating toxicity due to diffusable poisons. Cases illustrating the role of dialysis in oliguria lasting twenty-five days and in phenobarbital poisoning are presented.

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New Vaccine

An editorial in the January 5 Journal of the American Medical Association said progress already made in the study of virus-caused respiratory diseases indicates that many more problems will be solved "in the foreseeable future." Two articles in the same Journal reported success in developing a new vaccine to combat non-feverish, grippe-like illnesses especially prevalent among military personnel.

The editorial explained that viruses causing these illnesses, which do not include the common cold, have been variously named AD for "adenoid degeneration" or APC for "adenoidal-pharyngeal-conjunctival" in the past, but are now generally labeled adenoviruses. At least 14 types of adenoviruses have been identified so far. Types 1, 2 and 5 are frequently associated with feverish respiratory infections in young children. Type 3 causes a new disease called pharyngoconjunctival fever, which is seen most frequently in children. Types 4 and 7 cause much of the acute respiratory disease and primary atypical pneumonia seen among adults, and types 6 and 10 cause conjunctivitis (inflammation of the eyelid lining).

The editorial pointed out that the development of simpler laboratory methods has made it easier to identify previously unrecognized viruses, but early hopes that all respiratory diseases of unknown origin could be attributed to the newly recognized viruses have not materialized.

The vaccine described in the two articles was made to combat infections caused by types 4 and 7 adenoviruses. Viruses obtained from patients' throat washings were grown in monkey kidney tissues and then killed by incubating them in the chemical formalin. The process was described by Maurice R. Hilleman, Ph.D., Mildred S. Warfield, B.S., Salley Anderson, B.S., and Jacqueline H. Werner, M.S., from the department of respiratory diseases, Walter Reed Army Institute of Research, Washington, D.C.

The testing of the vaccine among 600 recruits at Ft. Dix, N.J., was outlined by Drs. Reuel A. Stallones and Ross L. Gauld, both from the Walter Reed Institute and Mr. Hilleman, Miss Warfield and Miss Anderson.

The vaccine, which caused no side effects among the persons receiving it, was found to be effective beginning one week after the initial injection. It caused a marked reduction in the number of illnesses requiring hospitalization during the second through the fifth weeks after vaccination. And no disease was found among the vaccinated men after the fifth week. It also appeared to reduce the number of persons with mild attacks of illness which would normally not have required hospitalization.

Interestingly enough, antibody development against type 3 adenovirus was found to be as great as that against 4 and 7, of which the vaccine was made.

Routine Operative Cholangiography

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THE PLACE of operative cholangiography in biliary surgery is ill-defined as indicated by the numerous contradictory papers that have been appearing in the current literature. These articles not only bring into sharp focus the inconsistencies and often diametrically opposed views regarding cholangiography, but also demonstrate the lack of a standardized technique of exploring the common duct.

Mirizzi of Argentina was the first to perform operative cholangiography. Mallet-Guy, Bergeret, and recently Soupault and Caroli of France have added materially to our knowledge of the abnormal physiology of the common bile duct with studies of pressure within the biliary tract, and cholangiography during and after operation. The studies of Mulholland and Doubilet on division of the sphincter of Oddi; of Whipple and others on radical resection of the head of the pancreas for carcinoma; and Lahey, Cattell and Cole on the treatment of strictures of the common duct are all great contributions which cannot be elaborated upon at this time.

The first choledochostomy for the removal of stones from the common duct was performed only 67 years ago[5]. Since that time the operation has become quite commonplace, and with the addition of refinements has become much more reliable and efficient. Among these refinements, one of the more valuable has been that of cholangiography. This has doubtless done more than any single effort to transform surgery of the biliary tract from a haphazard procedure to a much more exact one.

The incidence of common duct exploration at the time of operation for cholecystic disease varies according to different observers from 20 to 40 per cent. Of those ducts which are explored, stones are found in 25 to 50 per cent, and even after exploration, stones are over-looked in 10 to 25 per cent. These figures vary somewhat from those of Johnston[3] and his associates at the Mayo Clinic. They studied all cases of cholelithiasis that came to operation at the Mayo Clinic between the years 1940 and 1950, and estimated that stones were present in the common duct of approximately 10 to 20 per cent of all patients who underwent cholecystectomy, and that of the number who had stones in the duct, 2 to 26 per cent were overlooked or impossible to remove.

Regardless of the variation in the statistics, we are all aware of the gravity of this problem. It is obvious that any method that will reduce the incidence of retained stones, variously estimated from 2 to 26 per cent, should be thoroughly investigated, and it is toward this realization that operative cholangiography offers much.

There are two types of operative cholangiography[1]: The first is a preliminary visualization of the biliary tree at operation. It has its greatest usefulness in visualizing this system when there is no clear-cut clinical indication for exploration. Mehn[4], in a routine study of more than 113 patients by this method, was able to demonstrate numerous unsuspected common duct stones (10 per cent of the cases), intrahepatic duct stricture, neoplasm (extrinsic and intrinsic common duct obstruction due to metastasis or primary tumor), obstruction due to carcinoma of the head of the pancreas, and also the relationship of a fistula to the hepatic ducts. One of his most significant conclusions was that omitting exploration of the common duct when the cholangiogram was normal resulted in no postoperative difficulties.

The second type may be called control operative cholangiography, and is used to visualize the ducts after exploration has been carried out. Surgeons know all too well how easily stones are missed, even after supraduodenal palpation, irrigation, and probing.

There are numerous other advantages in using routine cholangiography. It has been truly said that there is no need to look for normal anatomic relationships in and around the gallbladder region as there is no normal. Cholangiography is of great help in demonstrating these relationship, so that errors, even catastrophy, can be avoided (Fig. 1).

Intra-hepatic stones (Fig. 2) can be visualized and with this knowledge we are at least forewarned. While this particular problem at present is insurmountable[2], some efforts towards its solution might

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be taken by flushing the hepatic radicles with saline through a small rubber catheter in an effort to dislodge the stone and carry it into the lower reaches of the common duct. If this fails, the procedure

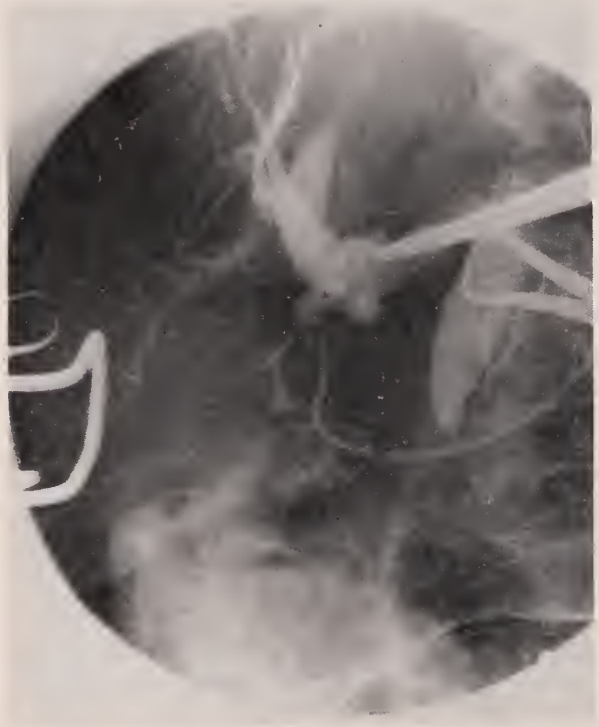


Fig. 1.—Carcinoma of the gallbladder, with bits of tumor within the common duct causing filling defects. Note the unusual disposition of the common duct as it traverses the abdomen in a horizontal plane, a fact vital to the operative approach.

recently described by Welch[7], and currently practiced at the Massachusetts General Hospital, may be tried: the sphincter of Oddi is dilated to a significantly wider diameter than the hepatic radicles to enable any stone dislodged therefrom to pass into the duodenum.

Walters[6] pointed out that 33 per cent of his patients with stone in the common duct had no jaundice. Many of the stones in the common duct were small and floated in the bile so that they were not impacted in the ampulla, and others were small enough to be lodged in the ampulla and still not cause enough continuous obstruction to bring about jaundice. This indicates that the floating and ampullary stones in the common duct that produce attacks of pain without jaundice, do so from spasm of the wall of the bile duct and possible associated spasm of the sphincter of Oddi. In such a situation, cholangiography is essential to determine the presence of stones, and also to check the state of these ducts after exploration has been done.

Interpretation of the roentgenograms showing an obstructed common duct without stones can offer difficulty. When the biliary tract is normal except for the failure of the contrast medium to enter the duodenum, the obstruction is probably due to spasm (Fig. 3). Repeating the cholangiogram with or without the addition of a local anesthetic in the contrast medium will show ready passage into the duodenum and a normal distal segment. When the obstructed duct is dilated (Fig. 1 and 4), difficulties of diagnosis are even greater. The obstruction may be benign (fibrous post-inflammatory stricture, pancreatitis) or malignant (intrinsic within the common duct, or extrinsic such as carcinoma of pancreas, and malignant nodes). As a general rule,



Fig. 2a.—Five or six stones are present in the distal end of the common duct, but a small intrahepatic stone is present in addition.



Fig. 2b.—Spot film made post-operatively, showing small radioluciency in angle of "T" tube, which proved to be a stone, probably the one noted within the liver at operation. This filling defect is assumed to be the stone that was withdrawn with the "T" tube.

the widest common ducts are found in the neoplastic conditions, but the final decision as to the cause of the obstruction must rest on the clinical, operative and laboratory findings rather than the roentgenologic.



Fig. 3a.—No opaque medium entered the duodenum, but note that the biliary tree is otherwise normal.



Fig. 3b.—Film made post-operatively showing normal common duct. This is considered an example of spasm.

Our indications for exploring the common duct may be mentioned in passing: 1. Jaundice or a history of jaundice; 2. Small stones in the gallbladder with dilatation and thickening of the common duct. Palpation for stones in the common duct is frought with so much uncertainty, and, in our hands, is so completely unreliable that we have abandoned the practice entirely. This opinion appears widespread.



Fig. 4.—The common duct is widened, but no filling defects seen. Clinical diagnosis of pancreatitis.

Lest it appear that we are carried away with our enthusiasm for operative cholangiography, we should like to emphasize that this procedure is not intended as a substitute for sound clinical judgment; there never will be a substitute for this invaluable gift. Roentgenologic study is an aid only, although an invaluable and irreplaceable one, but also with certain pitfalls that must be recognized. Interpretation of the cholangiogram of course is the most important part of the entire endeavor, but the possibilities of misinterpretation must be appreciated by those who would use this method. One of the main objections to this procedure in the past has been the poor technical quality of the examination. To remedy this, the radiologist must give his personal attention to the examination, expediting the entire procedure so that a minimum of time is lost in its execution.

The more one uses this procedure, the more adept he becomes and the more reliance can be placed in it. Since we have been using this method routinely in all cholecystectomies done at the Mary Washington Hospital for the past 2 years, to our knowledge there has been but one instance in which a stone in the common duct was unrecognized. This occurred in a technically poor examination, and cannot be considered an imperfection of the method.

The technique used in our hospital is as follows: After placing the patient upon the operating table, and before anesthesia, the cassette tunnel is properly positioned so that the estimated position of the common duct is centered over the tunnel. The patient is then anesthetized and the structures around the ampulla of the gallbladder are exposed and identified. The cystic duct is divided and a small catheter (either a ureteral catheter or a section of poly-



Fig. 5a.—After 5 cc., a concave filling defect is seen in the terminal end of the common duct, but positive diagnosis not possible.



Fig. 5b.—Defect much more definite after second increment of 5 cc.



Fig. 5c.—After third increment of 5 cc. of opaque medium, filling defect essentially lost. A single stone was recovered, and control cholangiography was negative.

ethylene tubing of suitable diameter and length) is inserted into the cystic duct for a distance not more than 6 or 8 centimeters. A ligature is placed around the duct to prevent leakage, and aspiration is done to fill the system with bile, thus obviating the possibility of the presence of air bubbles which can be extremely confusing in the interpretation of the roentgenograms. All unnecessary clamps are removed, and the area is covered with a sterile towel with the position of the underlying common duct indicated by a dot of merthiolate. The patient is rotated about 10 degrees with the right side down, so that the common duct may be projected away from the spine. The mobile unit is centered over the merthiolate mark and the catheter is injected after making sure that no air is contained within the system. The contrast medium (30% Urokon) is injected in increments of 5 cubic centimeters for a total of 15; exposures are made after each increment. We usually have the anesthetist make the exposures since she is best able to correlate these with the suspension of respiration. Multiple exposures are an absolute necessity; we have examples wherein only one of the three showed stones (Fig. 5). The films are immediately processed while the surgeon continues with removal of the gallbladder. The radiologist views the films as soon as they are cleared and telephones his preliminary report to the operating room. Any questionable findings are jointly discussed in the operating room by the surgeon and radiologist. The time consumed in the procedure is probably less than 5 minutes.

Every hospital with any claim to radiologic services has the required equipment. All that is necessary is a mobile unit capable of delivering 20 milliamperes at 85 kv and a cassette tunnel. Our department is equipped with a mobile unit capable of 200 milliamperes with a rotating anode, but the smaller unit suffices for all but the most obese patients. With the smaller unit we do not use a grid to reduce the secondary scatter, but depend rather upon a small cone. The field of the cone



Fig. 6.—This illustrates the position of the cassette tunnel under the patient's right side, with opening directed towards his head. The x-ray cassette is introduced into the tunnel slot in a tray.

must not exceed 7 or 8 inches in diameter. The small field is essential for diagnostic films. We cannot emphasize too strongly the need for strict limitation of the field when a grid is not employed. An average patient would require 20 milliamperes, 0.5 seconds, 75 to 80 kv.

While it is acceptable to have the cassette tunnel open to the side of the patient, we have it open under the patient's right shoulder, and thereby are able to insert the film without disturbing the sterile drapes (Fig. 6).

CONCLUSIONS

The advantages of operative cholangiography are discussed, and its rightful place in surgery of the gallbladder and bile ducts is delineated. Operative cholangiography brings to our attention the anatomic aberrations of the entire ductal system, and thus mistakes of a catastrophic nature can be avoided. Stones which could not otherwise be detected can be visualized, and much valuable information regarding the etiology of strictures can be ascertained. The inadequacies of this procedure are listed, and while it is not a substitute for sound clinical thinking, it is an invaluable aid in what can be the most difficult of all surgery. This technique has done much to transform surgery of the biliary system from a haphazard procedure to a much more exact one.

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Singer's Range.

The laryngoscope, an instrument which doctors have used for more than a century to examine the larynx or voice box, has apparently found a useful place in the field of music. A New York voice and speech teacher reports in the January issue of Archives of Otolaryngology, one of the American Medical Association publications that he can use the instrument to great advantage to learn what type of voice a singer has before lessons begin.

William A. C. Zerffi, a member of the faculty of the New School for Social Research, said voice identification is usually left to the teacher's judgment. But because of bad singing habits or because of the human ability to imitate various sounds, a voice is sometimes misidentified. This can lead to improper training, bad singing habits, or even the shortening of a singer's career.

However, these difficulties easily can be avoided by using the laryngoscope. The teacher simply looks at the length of the vocal cords. The shorter the cords, the higher the voice; thus a soprano has shorter cords than a contralto and a tenor has shorter cords than a bass.

The laryngoscope also offers the teacher an opportunity to see just how the vocal cords function, which will help him in his teaching. It's important that a singer be taught to sing within his natural range since only within that range can he sing easily and without exerting physical force. When he tries to sing in a higher or lower range, he must exert muscular force to the cords, and it's "little short of criminal to apply such force to so delicate a mechanism." Continued forcing eventually injures the cords and shortens the singer's career.

Relying on sheer force to produce tones also has another drawback: it makes it difficult for the singer to sing both the notes and the character. In other words, he's so busy forcing out the notes, he loses all dramatic or artistic expression.

The Use of the Caduceus as a Symbol for Physicians

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THE USE OF THE EMBLEM, caduceus, by physicians, particularly by those in the United States, has led to numerous discussions concerning its origin[4,8,10,11,12,18,27,29,34]. There has been considerable opposition to its use as a medical symbol since it is suspected that those who use it may be under the mistaken impression that they are using one which refers to Aesculapius, the God of Medicine[4,29]. The two-serpent emblem of caduceus is condemned although it is used by physicians in this country on their automobile license plates[16], although it is the symbol of the United States Army Medical Corps, the United States Navy Medical Corps, their auxiliaries, and the United States Public Health Service. Purists insist that the caduceus is at best a symbol of mixed connotations and that this emblem, particularly that with wings, is not a suitable device for the medical profession. Some believe that the emblem is better suited as a device of Freudian cults and psychiatrists rather than for medicine in general. These connote to the two serpents a phallic implication[10] since they claim that the serpents are in the position of coitus. As a fertility emblem, the obstetricians might also claim the emblem for their use.

It is the purpose of this paper to discuss the derivation of the term caduceus, to review the origin of the emblem, and to give the modern usage of the two-serpent symbol. The Aesculapian symbol is cursorily discussed in contrast.

Caduceus, a Latin word (*caduceus, caduceum*) comes from the Greek (*kerykeion*) meaning a herald's wand, from *keryx* meaning herald. This symbol has a central wand around which two serpents are entwined. Wilson[34] suggests that this symbol has an Egyptian origin and that it refers to the god Thoth, Hermes Trismegistus, who was said to have invented the healing art. Symbolically speaking, this prototype Hermes (as he is sometimes called) is a more attractive figure than the Greek Hermes with whom the caduceus is usually associated. The Egyptian Thoth was not a primal deity but an agent and a messenger of the Mother Goddess. This Mother Goddess, incidentally, was always depicted with a one-snake emblem.

Most writers, however, believe the symbol refers to the Greek god Hermes. In Rome this god was called Mercury. The wings, often surmounting the caduceus today, come directly from this Hermes, since his attributes were his winged sandals (talaria), winged hat (petasos) and the caduceus itself. This Hermes, besides being a god of diplomacy, arts, sciences, was also a god of commerce[18], of boundaries and of roads, of thieves, of gain and of riches, especially of sudden and unexpected riches. He was god of good luck at games. He is usually represented with his purse in one hand and the magic caduceus in the other. Hermes was not beyond turning a dishonest penny through shrewdness. He was the one who conducted souls to Hades. Our physicians working for safety devices in automobiles might not look with favor on this emblem, the caduceus, if this last connotation should be pointed out to them. They might rather agree with Tyson[29]: "As conductor of the dead to their subterranean abode, his emblem would seem more appropriate on a hearse than on a physician's car." In fact he was not an attractive god by any means. Literary allusions in Shakespeare, and elsewhere, reflect the unpleasant symbolism attached to this character[26,18].

The simplest, most logical and the kindest explanation of the use, or misuse, of the caduceus as a medical symbol seems to be a confusion in two gods of the same name.

As to the Aesculapian symbol, composed of a knotty staff encircled by a single serpent, this seems to have all virtuous connotations. It was copied from the statue of Aesculapius, the Roman god of medicine (Asklēpios, the Greek equivalent of the name). This statue, by Thasmeded, was at the temple of healing at Epidaurus. There were other Aesculapian temples. Pergamum, the birth place of Galen, a medical center in its own right, had a similar temple and statue. The physician's cane, which became known as the gold-headed cane, was

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This paper resulted from research undertaken to set up a library exhibit on the subject.

believed to be symbolic of the wand of Aesculapius, as portrayed on these statues.

The single serpent was always revered, possibly as something feared for its power, wisdom and danger to man. In addition it is an emblem of healing since it sloughs off its skin periodically[4] and thus symbolically, as well as actually, renews its life. It was also considered as a living circle, the emblem of eternity. Multiple serpents as emblems have various arrangements and connotations. Specimens have been found on reindeer horn of the paleolithic period and on Babylonian seal-cylinders. Aesculapius was often depicted as a serpent. In legend, a serpent, instead of Aesculapius, was dispatched to Rome in time of pestilence and saved the city. Concerning this legend, McCulloch[21] says: "Ovid, relating the story of the bringing of Aesculapius from Epidaurus to Rome to avert a pestilence in 292 B.C., makes the god address the embassy as follows:

" 'I come and leave my shrine,
This serpent view, that with ambitious play
My staff encircles, mark him every way;
His form, though larger, nobler, I'll assume
And, changed as gods should be, bring aid to Rome.' "[21]

In addition to curing the sick, in legend, Aesculapius called the dead to life. After he restored Glaucus to life a myth relates that Zeus killed him with a thunderbolt. Either Zeus feared men might escape death altogether, or Hades objected to being deprived of its lawful due. On Apollo's request, however, Zeus translated Aesculapius into the heavens as a constellation called The Serpent Holder[29]. There, according to legend, he continued to exert his healing power[24].

The only connection of Aesculapius with the Greek Hermes is through a late myth in which Hermes was said to be a half brother of Aesculapius, and he was said to be husband to Hygeia, daughter of Aesculapius[29]. There seems to be little connection between Aesculapius and the Egyptian Thoth, although Sozinskey[27] says some think that the staff of Thoth may have been the original of the one accorded to Aesculapius.

One of the earliest known representations of the caduceus is believed to be that on a libation vase found at Telloh (Lagash) now in the Louvre. This vase of green steatite was dedicated by King Gudea, a Sumerian satrap, to the god Ningishzida in the presargonid period, between 4000 and 3000 B.C. This figure is without wings. The Medical Library of the University of Virginia is very fortunate in having a black plaster copy of the Gudea vase. It was given to Dr. Paul B. Barringer who occupied the Chair of Clinical Medicine and Therapeutics at the University Medical School and Hospital some years ago. Miss Anna Barringer had brought it back as a gift to her father after a European trip. She later gave it to our library.

In actual practice, the first use of a two-snake emblem in medical association is credited to a Swiss medical printer, Johann Froben, who died in 1527. He apparently was not confused but deliberately chose a two-snake devise to identify the books he printed. This symbol neatly exemplifies his motto: "Be ye wise as serpents and harmless as doves."[4] Froben showed two serpents and a wand, surmounted by a bird. A modern Froben publisher has adopted a similar much stylized device.

Whether Froben knew better or not, his symbol was copied in his day by Sir William Butts, physician to Henry VIII of England[21]. Sir William used it on his coat-of-arms. This is believed to be the first use of the caduceus as a medical heraldic device. A few years later Dr. John Caius, author of a tract on sweating sickness, presented to Gonville and Caius College, Cambridge, England, a silver caduceus and an interpretation of his own in Latin[8]. In 1844 the medical publisher, J. S. M. Churchill of London, also used the emblem. This seems to be the last obvious appearance of the "mistake" in Great Britain. Today the Royal Army Medical Corps of Britain, Canada and Australia, and also the French Military service, use the true Aesculapian emblem. However, the Paris Medical Faculty displays the caduceus in its processionals. Charcot's caricature of his colleagues there may have something to do with the continuation of this practice[8,12].

At about the same time, the first half of the nineteenth century, Dr. Robley Dunglison, an Englishman and the first Professor of Medicine at the University of Virginia, devised an emblem for some of his books. It showed a single serpent drinking from a fountain. This symbol is Hygeia's attribute[27].

The fallacy, or use of the caduceus as an Aesculapian emblem, is deeply ingrained in the United States. Purists still point out the misuse but either physicians have no time to read such articles, many of which are letters to the editor, or doctors consider the controversy negligible.

The United States Army had most to do with spreading the use of the caduceus in the United States. The late Colonel John Van Hoff has received the main responsibility for this[8]. In 1856 the Army adopted the caduceus as an emblem for the chevrons of the stewards of its Medical Corps[4,11,21].

As such it denoted neutrality, similar to the marking of hospitals with the red cross in the First World War. Garrison, in defending the Army's use of the caduceus refers back to the days of Rome, as stated by Livy, when the caduceus was the heraldic device of the caduceator or peace commissioner, the equivalent of a flag of truce. Hence the Army Medical Corps' use of the emblem is for non-medical purposes; it is a military and an administrative symbol. The same author must have been hard pressed by arguments for in 1932 he stated as justification for the questionable caduceus: "The tune of the Star Spangled Banner was once sung to very ribald words in 18th century England. Nevertheless, it is our national air, capable of inspiring very exalted emotions on occasion, and we stick to it."[13] He accepts the caduceus also as potential energy, to "make medicine" in a time when medicine and magic had much in common.

The Army extended the use of the symbol in 1902 to the insignia of its medical officers[11]. In justice to the Army Medical Corps, it should be pointed out that the Aesculapian emblem is the one of its first coat-of-arms, adopted around 1818[21].

The American Medical Association adopted the single serpent motif in 1912 after it had dropped the Red Geneva Cross in 1909. Brown[4] states that the caduceus was at one time the emblem of AMA also.

The United States Public Health Service seal and insignia and the United States Navy Medical Corps still use the caduceus as their symbol. But the newer Department of Health, Education and Welfare uses the Aesculapian one.

Dictionaries, medical and otherwise, always tend to reflect usage. Hence the caduceus is often given in them an Aesculapian association which it does not deserve. Evidently the term is still in a state of flux, however, for there is no consistency in the dictionary definitions of the two terms. British tend to be purist, as you might expect from their more general use of the Aesculapian symbol.

Lenoury, as reviewed by Garrison[12], suggests that the caduceus be designated as the *Greek* or *commercial* caduceus and that the Aesculapian symbol be called the *medical* caduceus. Western Reserve University's Institute of Pathology uses a similar evasion in explaining its use on its building by calling it the *American* caduceus[33]. Lenoury further points out that since the *true* symbol is used by the medical officers of the British and French Armies, the caduceus is a nice differentiation for our medical corps from those of other nations, accidental though it may be[12]. Why it is necessary for us to be differentiated, erroneously, even for identification purposes, may be a moot point.

Users of the caduceus seem to be on the defensive, but the users are legion. A number of medical journals and other publications have followed the fallacy to the extent of naming themselves for the caduceus[30]:

Caduceus (Hongkong University Medical Society publication)

Caduceus (Fort Wayne, Indiana, Medical Society publication)

Caduceo: periodico del Estado Libre de La Puebla de Los Angeles, Mexico

Caducée (of Paris, of Louvain, of Marseilles and of Port-au-Prince, Haiti)

Caducean (Ohio State University)

Noted medical centers in the United States[4,29] and at least one in Great Britain, in Glasgow, have perpetuated the use of the caduceus on their buildings. This is true of new buildings as well as old ones, for the Howard University School of Dentistry building, as yet not completely furnished, is decorated with a caduceus. On the other hand the Los Angeles, California, County Medical Society new building displays the Aesculapian symbol.

Noted authors of medical subjects have been known to refer to the caduceus in an Aesculapian sense. Osler[29] and H. W. Haggard have been so accused. George Sarton, the noted science historian, in his recent book published by the University of Pennsylvania press[25] displayed a caducean symbol designed by Guenther K. Wehrhan. This caduceus somewhat resembles the Sunoco sign. (The Sun Oil Company must adopt Hermes as god of the roads.)

The caduceus also occurs in the emblems of medical societies, medical libraries, drug manufacturers and drug stores. Observe the infinite variations of this motif on medical journals, on bookplates of physicians and on those commercial bookplates intended for physicians' use. Serpent or serpents, winged or without, Aesculapian staff or the wand of Hermes, the patriarchal cross as a rod as used by the American Trudeau Society and displayed on the Bulletin of the National Tuberculosis Association. The serpents face each other, the serpents face away; single serpent with or without tongue extended, it faces east or west. Even the number of coils vary.

As a final denouement, a commercial bookplate shown in our exhibit combined the Hippocratic oath with the caduceus. Thus, as was said in another connection on the travelling *Ars Medica* exhibit (circulated recently by Smith, Kline and French for the Philadelphia Museum of Art): "Apollo, by whom

so many a physician supposedly has sworn, is linked not to his son Aesculapius, but to a non-medical and to say the least questionable, Hermes or Mercury."

Objections are bearing some fruit. As recently as February 1955 the Bulletin of the Columbus Academy of Medicine of Ohio corrected its error inherited from the past by changing the emblem on its cover from the caduceus to the Aesculapian symbol[20]. Dr. Grant Graves in 1947 had objected to the use of the caduceus and acknowledgment was made to his influence when the change was carried out.

The Air Force Medical Service recently adopted a new emblem of a single serpent, but called it a caduceus in a news item. Less than two months later James E. Cottrell, M.D.,[6] pointed out the "inaccuracy" to the editors of the JAMA.

Note what is happening in the Public Health Reports. The old Public Health emblem, the caduceus, is displayed in the back. On the cover the new Department of Health, Education and Welfare displays its symbol, the Aesculapian one.

No wonder that at one medical meeting in 1920, badges were distributed on which the Aesculapian serpent was disentangling itself to drink a cocktail[12].

SUMMARY

Although the use of the caduceus as a symbol for physicians began in error, although the symbolism of this emblem is in questionable taste, although these facts have been repeatedly commented upon, although Aesculapius, God of Medicine, has no connection with such an emblem, still physicians of the United States, in addition to our government groups enumerated, continue to use this emblem. In addition they refer to this symbol mistakenly as the Aesculapian emblem. Sporadic incidences of rectification have occurred; attempts have been made to justify its use. The fact remains that it is widely used, especially in the United States.

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Carbutamide

Eli Lilly and Company has announced the suspension of the fifteen-month clinical trial of carbutamide, or BZ-55. Carbutamide is a sulfonamide derivative which controls many cases of diabetes when given by mouth.

In a statement, Dr. Kenneth G. Kohlstaedt, director of the clinical research division, said:

"We have communicated this decision to some 2,900 physicians who have been testing carbutamide in more than 10,000 patients. We are grateful to these physicians and to scientists who have participated in what we believe is the most intensive study of a new compound undertaken to date by a pharmaceutical house.

"Our search for a safe oral antidiabetes compound which will relieve certain, selected diabetics of the necessity for daily Insulin injections is continuing undiminished. In fact we already have other compounds under study which we hope will offer more promise in offsetting the pancreatic defect that underlies diabetes without involving risks unacceptable in wide-scale treatment.

"Discontinuing use of the drug involves no danger to the 10,000 patients who have been controlling their diabetes with it. They may safely return to their former method of control.

"We are not unmindful of the fact that 40,000 patients in Germany have taken carbutamide without any serious side effects being reported by German investigators. Nor are we unmindful of the fact that in our own studies 95 percent of those patients who are able to control their diabetes with carbutamide appear to be able to do so for months without untoward effects. However, among the other 5 percent there have been a few serious side reactions to the drug which are identical to those experienced with other sulfa drugs.

"In view of these findings, and in full consideration that carbutamide is a drug of convenience rather than necessity, Eli Lilly and Company believes it is prudent to suspend the clinical trial pending further investigation. It appears to us that the risks of possible injury and perhaps long-term effects not yet established are greater than any short-term benefits which may seem to be derived from the drug.

"We deeply regret that this compound apparently does not meet the rigid requirements for a drug that must be taken throughout life. At the same time, we are grateful that the study of carbutamide was broad enough and thorough enough to uncover its limitations.

"In the early study of carbutamide in about 700 patients, diabetes experts reported to us that there were almost no serious side reactions to the drug. As carbutamide continued to 'look good,' we expanded all phases of the investigation. The clinical trial was increased to include more than 10 000 patients. It was only after the larger test was put into effect that adverse reports began to be heard from the field.

"We share the disappointment of many diabetics. They had hoped that carbutamide would be the long-sought answer to the need for an oral therapy. We had hoped that through the introduction of carbutamide in the United States we could add to our long list of contributions to diabetes therapy which began with the first commercial Insulin preparation in January, 1923."

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Richmond, Virginia

Case #184 (A-9225)

A THIRTY-YEAR OLD colored male was admitted to St. Philip Hospital on July 24th because of weakness, fever, and weight loss. He was a known alcoholic of several years' standing and had been drinking heavily for several months prior to admission. He admitted to several episodes of hallucinosis during this period. For approximately ten years he has suffered with lichen simplex chronicus involving the scrotum and inner thighs with intense itching. Four months prior to admission he had been given terramycin for secondary infection. Four days later he developed diarrhea and terramycin was discontinued. One month later he was seen in the Emergency Room complaining of diarrhea and weakness. Temperature 102.4, blood pressure 130/60. There were small, non-tender lymph nodes in the cervical, axillary, and inguinal areas, a soft systolic apical murmur, and chronic lichenification of the scrotum and inner thighs without gross infection. Hemoglobin 9.6 grams, RBC 3,270,000, WBC 5,500. Urine was negative and a chest x-ray was negative. He was treated with intravenous fluids, Kaopectate, streptomycin, penicillin, and sulfathalidine. The following morning he was greatly improved and was discharged, to be followed in the NP Clinic, but he failed to return. Five days later he appeared in the Out-Patient Clinic, again complaining of diarrhea, and was given symptomatic treatment. On July 12th he was again in the Emergency Room, complaining of weakness, dizziness, abdominal cramps, and sore throat. Temperature 103, B.P. 90/40. Examination revealed dehydration, a small area of exudate on the left tonsil, and a liver border 3 fingers below the right costal margin. A chest x-ray revealed mottled densities in the lower right hilum suggesting pneumonia. Hemoglobin 6.6 grams, WBC 4,250, polys. 69, lymphs. 30, monos. 1. The urine revealed 10-12 WBC with occasional clumps. He was treated with penicillin and fluids and again improved markedly overnight. He was discharged the following morning on terramycin, iron, and vitamins. He apparently took these medications irregularly and returned to the Emergency Room on July 24th, when he was admitted.

His past history was otherwise negative. His family stated that he had been in good health until he developed the skin trouble and started drinking approximately ten years earlier.

Physical Examination: Temperature 102 (R), B. P. 92/50, pulse 108, respiration 28. He appeared acutely ill, emaciated, and dehydrated. The neck was supple. The pharynx, tongue, and buccal mucosa were covered with a thick white material which could be easily rubbed off and not leave a denuded surface. The teeth were very dirty. The lungs were clear and the heart not remarkable. The liver border extended 2 fingers below the right costal margin. The spleen was not palpable. The skin of the scrotum and inner thighs exhibited chronic thickening and scaling. Rectal examination was negative except for the presence of greenish-black feces. There were numerous, small, non-tender posterior cervical nodes bilaterally. Axillary and inguinal nodes were not remarkable. Neurological examination was grossly normal.

Laboratory Data: Hemoglobin 5.8 grams, hematocrit 18, RBC 2,270,000, WBC 2,550 with 80 polys., 14 lymphs., 1 bas., 1 eos., and 4 monocytes. MCV 79, MCH 26, MCHC 32. Reticulocyte count 2.4%. Sickle cell preparation was negative. A peripheral blood smear revealed a normochromic, normocytic anemia with moderate anisocytosis, slight polychromasia, plentiful platelets, leukopenia with increased bands, rare myelocytes, a few phagocytic monocytes, and toxic changes. Bone marrow revealed a myeloid hyperplasia with a shift to the left, heavy granular erythroid elements plentiful, many phago-

cytic reticuloendothelial cells, slight increase in plasma cells, and "frequent hypersegmented cells resembling those seen in tuberculosis". No inclusion bodies or L. E. cells were seen. BUN 10 mgm.%. Sodium 129, potassium 3.8, chlorides 87, CO_2 25 mEq/L, respectively. Serum bilirubin normal. BSP 6% retention. Cephalin flocculation 2+. Serum proteins 5.0 grams % total, albumin 2.2, globulin 2.8 grams %. A throat smear and culture showed Neisseria and alpha Strep. with no pathogenic fungi. Chest x-ray revealed clearing of the previously described pneumonia. Stools were positive for occult blood and negative for ova and parasites. Heterophile agglutination was negative as were agglutinations for Proteus X-19 and Brucella. Agglutinations for typhoid "O" were negative, for typhoid "H" positive 1:80, and for para "B" positive 1:40.

Following admission the patient was started on penicillin in large doses with parenteral fluids and multiple vitamin supplements. His temperature dropped initially but rose again to 104° and remained elevated. Three days after admission the patient was started on INH, 100 mgm. t.i.d.; streptomycin, 2 grams daily; and larger doses of penicillin. There was little change in his general condition, though his diarrhea temporarily diminished and his temperature became irregular, varying between 96 and 104 each day. He was given several whole blood transfusion and on July 30th his hemoglobin was 10.6 and his white count 6,900. Platelet count at this time was 51,000. Sodium 116, potassium 3.2, chlorides 86, and CO_2 25 mEq/L, respectively. On August 3rd he began to have diarrhea again. Stool cultures yielded only Proteus and a coliform organism and several blood cultures were negative. A barium enema was essentially negative and a G-I series showed only hypermotility. The patient ate poorly, but his fluid intake, supplemented by occasional parenteral fluids and blood with additional oral sodium chloride and potassium chloride, was good and his urine output satisfactory.

During the night of August 6th the patient was confused. On the morning of August 7th he had a convulsion and lapsed into coma. His neck was supple, his pupils pinpoint, and his deep reflexes intact. Spinal fluid examination revealed no cells and a protein of 15 mgm. By that afternoon the patient had developed marked edema of the eyelids and conjunctivae and a 2+ edema of his ankles. His blood pressure became unobtainable. He did not respond to supportive therapy and died at 12:30 A.M. on August 8th. An autopsy was obtained.

CLINICAL DISCUSSION

Dr. Elam C. Toone, Jr.*: This thirty-year old colored male was admitted to the hospital with the history of his present illness having existed over approximately a four months' period. The following items in the history, physical examination and special studies are important.

Systemic: The patient complained of weakness, fatigue, weight loss and fever. The temperature had varied between 96 and 104, with the principal readings between 102 and 103 degrees Fahrenheit. *Skin and Mucous Membranes:* Lichen planus involving the inner surface of the upper thighs and scrotum had been present for 10 years. On one occasion a secondary infection was treated with terramycin. Severe pruritis was present on occasion. A thick white exudate involving the mouth and upper pharynx was noted; this was described as not producing any bleeding when removed. Terminal periorbital edema with edema of the conjunctivae and ankles occurred. *Cardiovascular:* Hypotension was present. The initial blood pressure was recorded as 130/60. Thereafter, blood pressure readings were recovered as 90/40 and 92/50. The blood pressure was unobtainable just before death. A soft, blowing systolic murmur was heard at the apex and in the mitral area. *Gastrointestinal:* There was a history of intermittent diarrhea beginning four days after the treatment with terramycin for secondarily infected lichen planus. Thereafter, diarrhea was intermittent in nature, and was occasionally associated with abdominal cramps. Examination of stool specimen was positive for blood, but negative for parasites and ova. Rectal examination was reported to be negative. A barium enema and an upper G. I. series were negative. On various occasions, the liver was found to be two and three fingerbreadths below the costal margin. The BSP dye excretion was 6%, and cephalin flocculation 2 plus. *Reticulo-endothelial:* The spleen was not palpable. On two occasions it was noted in the record that there were numerous, small, nontender posterior cervical lymph nodes bilaterally, and axillary and inguinal nodes which were described as not being remarkable. These findings are taken into consideration with the evidence of a pharyngeal infection and a lesion on the inner surface of the upper thigh which at times had been secondarily infected. *Renal:* There were only two descriptions of urine examinations. One of these described the urinalysis as being normal, and the other 10 to 12 white blood cells. One BUN was

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10 mg.% *Nervous System:* He had experienced hallucinations, convulsions, coma, and pin-point pupils at various times during the illness. *Hemopoietic System:* Normocytic hypochromic anemia was reported with hemoglobins reported as 9.6, 6.6, 5.8, and after several transfusions 10.6 gm. Two red blood cell counts were reported as 3,200,000 and 2,200,000 with a transient leukopenia. The white blood cell counts were reported variously as 5,500, 4,250, 2,550 and 6,900 with the following differentials: polys. 69 to 80%, eos. 1%. Platelets were reported on one occasion (7-30-56) as 51,000 (thrombocytopenia), and peripheral smear (7-24-56) reported platelets appearing in normal quantity with a neutropenia. A bone marrow smear at this time reported a myeloid hyperplasia. The blood indices, sickle cell preparation and reticulocyte counts were not significant. No LE cells were present. The blood electrolytes were: Blood sodium 129 and 116 meq L, chlorides 87 to 86 meq/L, potassium 318 and 3.2 meq/L; CO_2 25 meq/L on two occasions. There was a reversal of the A-G ratio with total protein reported as 5 gm., albumin 2.2 and globulin 2.8. Agglutinations for heterophile and routine agglutinations were negative, as were blood and stool cultures.

Treatment was instituted in the Emergency Room with terramycin for four days which resulted in diarrhea. He also received intravenous fluids, Kaopectate, streptomycin, penicillin, sulfa-thaladine, iron and vitamins. While in the hospital he was treated with penicillin, fluids, concentrated vitamin preparation and then INH with streptomycin. He also received multiple blood transfusions, and sodium chloride and potassium chloride by mouth.

The following differential diagnoses are considered: Infections: pathogenic bacteria, mycotic organisms, virus infection. The temperature elevation, weight loss, diarrhea, evidence of pneumonitis and skin infection are in keeping with this diagnosis; but the consistently low white blood cell count and the failure to respond to antibiotic and chemo-therapeutic agents are against it. A profound thrombocytopenia is only occasionally seen. No infectious pathogenic organism, bacterial or otherwise, could be found.

Alcoholism: A case could be made out for pellagra considering the excessive alcohol intake, the four D's (dermatitis, diarrhea, dementia and death) and small heart; but the type of skin lesion, leukopenia and failure to respond to treatment rule against this diagnosis. Delirium tremens might also be considered due to the history of hallucinations, coma, convulsions, temperature elevation and weight loss. However, the irregular course, hematologic studies and normal liver function are not typical of this. *Bowel lesion:* colitis, regional ileitis, or infection. The negative stool cultures and negative gastrointestinal x-rays eliminate this diagnosis in spite of the chronic diarrhea and presence of blood. *Addison's disease:* hypotension, fever, small heart, reduced sodium and chloride, skin eruption and diarrhea are all found in Addison's disease; but the low potassium, consistent sodium and potassium ratio greater than 30, depressed white blood cell count, normal polymorphoneutrophil count and absence of eosinophilia are against this diagnosis. *Collagen vascular disease:* rheumatoid arthritis, rheumatic fever and scleroderma eliminate themselves for obvious reasons. Polyarteritis is necessarily considered because of the fever and reversed A-G ratio. The leukopenia, absence of eosinophilia, low blood pressure, absence of peripheral neuritis, hemorrhagic dermatitis or asthma are against this diagnosis.

Disseminated lupus erythematosus is considered to be the most likely diagnosis because of the fever, weakness, weight loss, transient pneumonitis and pleuritis, leukopenia and thrombocytopenia associated with a normocytic hypochromic anemia, reversal of the A-G ratio, positive cephalin flocculation test, membranous stomatitis and pharyngitis, terminal peri-orbital edema and ankle edema, hepatomegaly, diarrhea, and central nervous system symptoms consisting of hallucinations, confusion and coma. Against the diagnosis of systemic lupus erythematosus, or at least failing to confirm the diagnosis, is the fact that no LE cells were seen, although this test was positive in only 82% of a large series recently surveyed at Johns Hopkins Hospital. There was also an absence of the typical skin lesion although lichen planus-like changes have been described, there was no evidence of renal disease, and no joint manifestations.

Dr. Elam C. Toone's Diagnosis

Systemic lupus erythematosus.

Pathological Diagnosis

Hodgkin's disease—granulomatous type, of all lymph nodes, liver, spleen, lungs and bone marrow of vertebrae, sternum, ribs, ilium and femur.

DISCUSSION OF PATHOLOGIC FINDINGS

Dr. Lester F. Belter*: The excellent discussion of differential diagnosis by Dr. Elam Toone has

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been most elucidating. This case, to say the least, was clinically most elusive. As the clinicians who treated the patient considered the diagnosis to be solely a case of alcoholism with its complications or miliary tuberculosis. Salmonellosis and disseminated lupus erythematosus were high on the list of possibilities.

It should be pointed out, for the students' benefit, that the diagnosis could have been established during life had a good rule been followed. All cases of unexplained febrile illnesses should have a lymph node biopsy with one-half of the specimen being used for histological examination and the other half being used for bacteriological examination. Far too frequently a good diagnosis is lost due to failure of observing the second part of the rule.

At autopsy the prosector was able to demonstrate a fine lymphadenopathy of the posterior cervical triangle and each axilla. No inguinal or epitrochlear lymphadenopathy was appreciated. There was no morphologic evidence of hypertension. The lungs showed striking morphologic evidence of organizing pneumonia. This probably accounted for at least some of the fever displayed. Granulomatous Hodgkin's tissue was found throughout the lungs in small nodules. The liver was enlarged and weighed 1790 grams. Diffuse infiltration was noted (Fig. 1). There was no evidence of bile stasis. The liver is involved in Hodgkin's disease in 50% of cases[1]. We have never seen anything other than moderate enlargement of the spleen in Hodgkin's disease. Jaundice is indeed rare as the result of involvement by any of the malignant lymphomas. The patient had pleurisy with effusion which is frequent in Hodgkin's disease and appears to be independent of involvement of the mediastinal nodes, much more commonly secondarily to secondary lesions of the pleura.

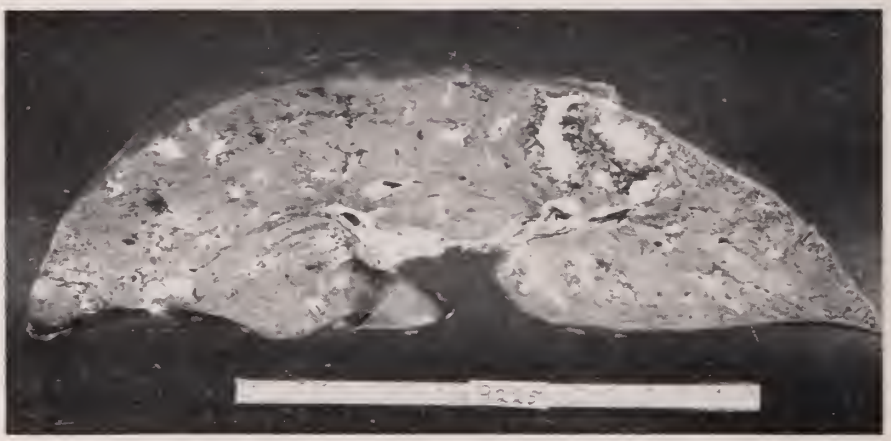


Fig. 1—Involvement of the liver by Hodgkin's disease.

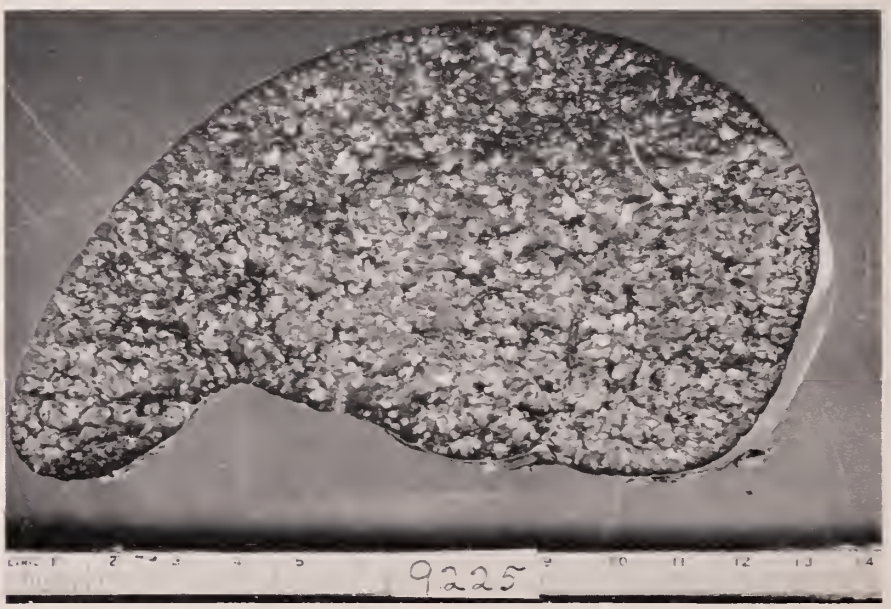


Fig. 2—Innumerable nodules of Hodgkin's granuloma in the spleen

The spleen weighed 350 grams. It is stated in the literature that the spleen is involved in 50 to 70% of cases of Hodgkin's disease. Contrary to the statement read in textbooks, massive involvement of the spleen is rather uncommon. In the case today small tumor nodules are seen throughout the organ.

In summary, this case of Hodgkin's granuloma ran a rapidly fatal course and this is manifested in the histological sections as there were areas of reticulin cell sarcoma. It is now known that Hodgkin's disease may have this type of course or even last for as long as 18 years. Recently we have seen such a case. Hodgkin's tumor cells may take on bizarre malignant characteristics and form reticulin fibers. When this occurs the disease becomes refractory and progressive, and represents advent Hodgkin's sarcoma (reticulum cell sarcoma). The case today is rather unusual in that appreciable lymphadenopathy and splenomegaly were absent. Furthermore, mediastinal lymphadenopathy on x-ray was not evident. We believe that Hodgkin's disease begins in either retroperitoneal and/or mediastinal lymph nodes and this is followed by the involvement of remainder of reticulo-endothelial organs.

The term Hodgkin's paragranuloma is obsolete. Probable cause of death was generalized Hodgkin's disease with organizing and acute bronchopneumonia followed by myocardial failure, coma and death. The brain was free of lesions.

DR. KINLOCH NELSON: Dr. Toone, would you care to close the discussion?

DR. ELAM C. TOONE: In conclusion, I am surprised at the diagnosis of Hodgkin's disease. I must confess that the diagnosis of malignant lymphoma was given only passing attention, and not sufficient to be included in the various differential diagnostic possibilities. The only suggestion of this disease so far as the clinical picture was concerned was the presence of the lymphadenopathy. Its description did not impress me at all, and obviously did not impress the clinicians attending this patient in the hospital. I will contend that so far as the history, physical findings and special examinations are concerned, systemic lupus erythematosus seems a much more likely diagnosis than Hodgkin's disease. This serves to emphasize, however, a fact that we should always keep in mind. Whenever a case presents diagnostic difficulties, every and all means of examination should be utilized. In this case, the whole matter could have been settled with a biopsy of a lymph node.

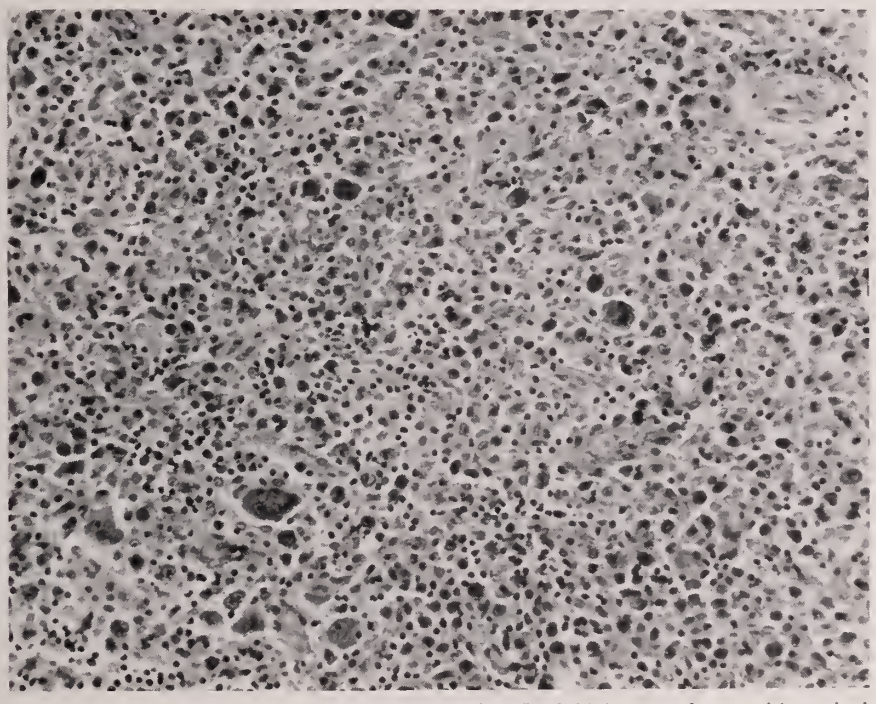


Fig. 3—Photomicrograph of lymph node showing Hodgkin's granuloma with typical Reed-Sternberg giant cells.

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Pre-Paid Medical Care . . . .

Edited by
Richard J. Ackart, M.D.

Medicare

Though Medicare might more accurately be classified as a *post*-payment program, it nonetheless seems to be an appropriate subject for discussion on this page. And it might be helpful were this month's article to clarify somewhat the respective roles of the three organizations concerned with the development and operation of the program—the Government, The Medical Society of Virginia, and the Richmond Blue Shield office.

The dependents of a serviceman have always been eligible—"for free"—for whatever care could be provided by the military personnel and facilities located at the post or installation where the serviceman might be stationed. This care has varied, both quantitatively and qualitatively, in accordance with the size, location, and type of installation; it has been unavailable to those dependents who, by choice or by necessity, remain in their home-towns; it has had an appreciable influence upon the duration and magnitude of the "doctor draft".

The Services wanted to replace, or at least to supplement, this hit-or-miss arrangement with one that would provide uniformity of benefits—that would be comparable to the health insurance item of an industrial employee-security program and would be considered a valuable "fringe benefit" by men who were debating the pros and cons of a military career. Organized medicine recognized the inequities and disadvantages of the hit-and-miss arrangement and saw in it, too, a bit of "socialized medicine"—care of civilians by physicians on the Government's payroll. Accordingly, it wanted to replace the old arrangement with a program which would provide for the civilian-dependents to be cared for by civilian doctors and which would be characterized by "free choice". And so it was that representatives of the Services and of the A.M.A. got together to plan the details of Medicare and that the A.M.A. as well as the Services sponsored the congressional action which translated their plans into federal law.

Medical care for servicemen's dependents is not an innovation. Medicare, however, is entirely new in concept in that it invites civilian physicians to provide the care, includes fee-for-service compensation for the physicians who participate, and relies upon local civilian organizations for the day-to-day administrative work entailed. Thus, Medicare involves a working, cooperative agreement between the Government as purchaser of doctors' services, the Medical Society as the doctors' corporate representative for professional matters, and the Blue Shield office as the doctors' corporate representative for the business matters entailed.

According to the agreement the Government provides the money for the professional fees payable under the Medicare contract. It pays the administrative costs, direct and indirect, which the Blue Shield office incurs when serving as Fiscal Administrator. Through the Fiscal Administrator the Government also reimburses the Medical Society for its pertinent expenses. The Government holds itself responsible for informing servicemen about the program and for establishing the eligibility of their dependents.

The Medical Society of Virginia entered the agreement as spokesman for the majority of its member-physicians. Though the Society represented the physicians of the State and acted in accordance with their best interests, it made no commitments concerning physicians as individuals. No physician need participate in Medicare if he prefers not to. For the most part, dependent-patients are "new patients" to civilian doctors; each civilian doctor is entitled to exercise his "free choice" about accepting them—or any one of them. By accepting an eligible dependent as a patient, however, a physician commits himself—in that one case—to compliance with the "full-service" arrangements and the other rules and regulations of the Medicare program.

For obvious reasons, no medical care program can function properly unless the financial liabilities involved can be fairly accurately determined in advance and provided for. Thus, a somewhat stringently fixed schedule of fees payable under the program is an actuarial necessity. Equally obviously, it would be administratively impossible to compensate each participating physician according to his

own personal fee schedule. Accordingly, the Government requested the Medical Society to propose a Medicare fee schedule that would be properly applicable throughout the State. To devise such a schedule, to compromise equitably the many different fee levels that exist in Virginia, was indeed a weighty responsibility for the Society to fulfill, and the end-result reflects credit upon the Society's officers and staff.

As the program continues it will be the Medical Society's responsibility to arrange for determination of fees for individual, unusual cases and to make available to dependent-patients and to doctors a procedure for adjudication of any disputes or complaints which might affect patient-physician relationships.

The Medical Society might have accepted, also, the responsibility for the administrative work pertaining to Medicare. However, an appreciable enlargement of the Society's executive staff and an I.B.M. installation would have been prerequisite to doing so; accordingly, the Society quite naturally turned to its sponsored agency—Blue Shield—which was well experienced in handling the type of work involved and could take the added work in its stride. The Blue Shield office located in Richmond, therefore, is serving as Fiscal Administrator for Medicare in Virginia only because the Medical Society requested it to do so. Blue Shield per se, that is, Blue Shield's own program, is not involved. The Medical Society directs the Medicare work done in the Blue Shield office; the Board of Directors of the Blue Shield Association, with its consent, is being by-passed completely.

The Blue Shield office, as Fiscal Administrator, will process all Medicare claims for professional services. Payments will be made directly to physicians in accordance with the Schedule of Allowances for Physicians Services, which is a part of the contract between The Medical Society of Virginia and the Government. The Blue Shield office is responsible for furnishing the Government with detailed statistical data about the claims that are paid and for furnishing physicians with information about the program and its operation. In this latter regard, it has made copies of the Medicare Fee Schedule and Physicians' Manual and has distributed them to all doctors in the State.

SOME PRACTICAL POINTS

1. A Medicare claim cannot be processed for payment by the Blue Shield office, under the provisions of the contract, unless COMPLETE INFORMATION is provided on the claim form (DA Form 1863, 1 Nov. 56).

2. Payment will be made by the Blue Shield office within twenty-four hours of receipt of the claim form in all cases in which complete information is furnished, or is on hand, and for which scheduled fees are applicable.

3. Medicare is primarily an in-patient program; therefore, before processing a claim the office must have a record of the dates of admission and discharge whenever the fact of hospitalization is not obvious (as it would be if the claim pertained to major surgery). It is suggested that specific information about hospitalization be furnished by the physician as one of his entries in Item 22 of the claim form.

4. The claim-handling process will be facilitated whenever the physician quotes exactly the pertinent terminology of the Fee Schedule and supplies whatever amplifying information might be appropriate. For example, the Medicare fees for anesthesiology services are based on time; therefore, the kind of anesthesia and its duration should be specified on the claim form.

5. If doing so does not entail inconvenience, the physician can speed along the claims handling process by sending in the original and one carbon copy of a completed claim form. Nonetheless, a single copy only—the original—is satisfactory; the Blue Shield office will make a photo-copy of it.

6. Medicare claim forms may be obtained from "Blue Shield Office, Richmond 19". If ever "caught short", however, the doctor should remember that forms are available in all of the general hospitals in Virginia.

The executive staffs of the Medical Society and of the Richmond Blue Shield office—Government representatives, too—are working closely together toward the common goal of serving well the physicians who provide Medicare services. All who are involved with the administrative aspects of the program would welcome suggestions about how best to attain that goal.

Mental Health . . . .

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"Untreatable"

A question arises as to whether or not there are emotionally disturbed children who cannot be treated by orthodox methods of psychotherapy. There are many well known and productive varieties of psychotherapy used in order to deal with the problems of children. To mention a few, individual psychotherapy, group psychotherapy, play psychotherapy, directive and non-directive approaches. All the methods and approaches usually employed, however, require certain things of the patient; that he be of average intelligence, be able to relate in some way to others, be able to verbalize, that there be sufficient control and inner strength to withstand the ordeal of therapeutic treatment in an out-patient clinic without violently destructive outbursts, and that there be cooperative parents who will support the growth tendencies of the child. If by orthodox methods one means methods which generally require these criteria, then an affirmative answer can be given to the original question. There are children with severe emotional problems who do not measure up to a few, if any, of these criteria and therefore cannot be treated by orthodox methods. There are non-verbal children who are not sufficiently related to people to express themselves; the word is no meaningful instrument as the relationships they have experienced aren't meaningful; their own needs and thoughts are too blocked for recall. There are those who are functioning quite below the average potential they possess. Many are too impulse ridden to be reflective. Their parents, often uncooperative, are also burdened with severe emotional illnesses which do not lend themselves easily to correction. They often do not bring the children into the clinic or encourage them to come; thus the clinic itself has to attract and hold the child. The parents are often handicapped by social, educational and economic deprivations. The latter is also true in respect to the children; thus avenues which the therapist may use as auxiliary supports and incentives are absent. Can psychotherapy be adjusted to this type of patient? Although this field of endeavor is in its infancy, the answer again may be given in the affirmative. The remainder of this article will deal with a general description of one kind of psychotherapy that is proving to be of success with one kind of "untreatable" child, the chronic aggressive. Schizophrenics, schizoids and severe neurotics are also helped by day-care and residential programs; however it is felt that the programs and methods would differ from the one described.

First and foremost a substitute environment is given this child; a place which will be his the way he is; will not reject him or play into his need to reject it. A permissive atmosphere is extended them. Here are provided specific activities such as crafts, shopwork, recreation, movies and academics. All are geared to the child's individual needs and capacities at the time. Generally, the program becomes more and more conventional as the children's ability to cope with the requirements increases. In addition to mental hygiene approaches utilized by the group workers when conducting these activities, psychologists and psychiatrists conduct interviews with the children at the time various incidents relating to their problems arise. Only as security gains can more orthodox sessions with therapists be held.

Placing the child in a permissive atmosphere is advantageous for many reasons. One of the chief reasons is that they cannot be maintained in school or at home for long lengths of time without truancy, running away or havoc. After initial shock and suspicion it has been found that this type of child at least is not a truancy or run away problem in the clinic. When it does occur it is treated in view of the problems it represents and it soon drops out. What decreases these problems is no doubt that for the first time their acting out is not returned by rejection or punishment. The latter at first is only seen as a rejection not as a corrective measure. Usual punishments require relationships values, positive needs as incentives. Taking away a movie at a time when the child feels bereft of everything is meaningless. At best he may control himself out of fear of physical attack, but he is even then too impulse ridden to maintain the limitation for any length of time. Being helped to become aware of

Contributed by ROBERTA M. FITZGERALD, *Psychologist, Educational Therapy Center, Richmond, Virginia.*

the specifics of his suffering, fears and hostilities, and assisting him to gain inner control while supporting him seems to be the only relatively permanent way of socializing him and keeping him in the clinic.

Permissiveness initially knocks the child off his guard; the vicious circle of persecutor and persecuted is at last intruded upon. In the beginning the child may see the workers as only superior delinquents (which would make for aroused interest). However, they soon are able to see that acceptance does not mean condoning and begin to lean on the secure acceptance given them as an outer control. Often the teacher then becomes the "good father" or "good mother". The clinic itself is often seen in this light. On occasion there has been running away from foster homes to the clinic when the workers are not present because the clinic itself has this meaning for the child. Permissiveness also allows for the acting out of problems the child cannot verbalize and gives the therapist the only inroad to "see what is going on" inside of him. Such interviewing as incidents occur also overcomes the inability of the child to verbally recall and tends to lessen anxiety surrounding the one to one relationship between therapist and child which occurs when the child faces structured and more regulated sessions. Placed in a relatively large group the child is supported by other children and by the presence of various adult personalities as well as by different rooms, activities and objects. All tend to lessen anxiety if there is no extreme in diversity. For example, too few workers grant too little control; too many have the same effect. The group, of course, provides the opportunity for varied interactions which reveal areas of difficulty.

The group plan described is one of day-care. Residential care for a good number of the cases would increase efficiency and results. Treatment would be more intense, quicker, without as many peripheral problems, and more children could be worked with. In a day-care set-up important experiences in regard to daily living cannot be handled therapeutically. The child in day-care has to be able to shift between two "homes".

Follow-ups which have not been as scientific as desired, due to lack of personnel, have indicated a high incidence of positive results by means of the treatment method described. Cost for such services does not preclude the possibility of its being included in state programs. It has been estimated that the minimal cost for a day-care program would be $54,000.00. As can be seen costs ideally would be higher than the average orthodox clinic by nature of the program. The principal reasons for increase are in relation to supplies needed, repair bills and an increase in the number of staff members required. Viewed immediately and on a long term basis, its service to the individual and to the community is felt to warrant the expenditures involved.

The treatment plan does however entail many problems particular to it. The selection of personnel is one of the chief difficulties. Persons working with concrete chronically aggressive children over and above training and education must have certain personality characteristics if they are to work effectively without undue personal strain. Flexibility, imagination and ability to handle one's own hostility adequately are paramount. They must not be achievement bent and must be able to wait a good while for it to take place. Supplies must be at hand continuously and breakage must be immediately repaired. These children are often agitated merely by the absence of materials, having little capacity to interest themselves or to be interested in others. Breakage is contagious and what may have been an unavoidable incident can, if not cleared away and mended, incite the group to riotous untherapeutic acting out. A great deal more time than usual has to be spent on program planning and staff conferences. Determining techniques for the group and for the individual, when and how the program should be shifted, the content of the program, analysis of behavior, all must go on continuously. Social work in this area is quite difficult largely because of the fact that it is done with foster parents under stress, and because, as mentioned previously, where there are real parents in the picture their disturbances and deprivations are severe. When so many of the children are wards of welfare agencies, the division of function, realization of agency limitations, and interpretation of the children's behavior and the program, all constitute problems which have to be worked through. For example, treatment is long term—18 months at least, and most agencies are not financed well enough or have enough available homes to keep any child in treatment much longer. Communication of such an unorthodox method to the public (particularly to those in the immediate neighborhood of the clinic) is again a problem. Intake policies must be studied to determine which type of "untreatable" can fit into the group. Some "untreatables" are not chronic aggressives. Can other types of "untreatables" fit into this type of program and be helped?

The challenge to work through these problems as well as to improve techniques in relation to treatment of this kind of child is being taken up more and more.

Group plans on a day-care and residential basis are becoming increasingly prevalent; some run on an intensive basis, some supportive, some for schizophrenics, some for heterogenous types of "untreatable" disorders, some where the basic emphasis is on research. Much is expected to be gleaned which can increase the productivity of such programs. It is established that the general approach is fruitful. The method very generally described here is one of the attempts felt to be most promising and rewarding with one group of otherwise "untreatable" children.

Angina Pectoris Treatment Improves

One generation ago the diagnosis of angina pectoris was almost a death sentence; in 30 years it may be a rare condition, according to a New York cardiologist.

Angina pectoris, a severe pain in the chest which sometimes carries with it a feeling of suffocation and a fear of impending death, is one of the most painful effects of coronary artery disease. Arteriosclerosis produces a narrowing of the arteries of the heart which reduces the normal flow of the blood through the heart. Effort or excitement may cause spasms in the heart arteries which then produce pain.

In a signed editorial in the December 22 Journal of the American Medical Association, Dr. Arthur M. Master of Mount Sinai Hospital said there have been many improvements in the treatment of angina pectoris, but the major change has been one of approach to the condition. It is now realized that arteriosclerosis is a disease like any other and is not an inevitable process of aging. As a result there has been an unparalleled surge of research, and a more optimistic outlook has developed among physicians and patients with angina.

Thirty years ago the severe pain that the patient suffered, the little understood prevention of anginal pain and the condition's inadequate treatment engendered fears that could not be dispelled. The agonizing dread then associated with angina resulted largely from the existing economic and psychological factors. A man did not dare be absent from work or he would lose his job, so he ignored the pain and kept working, thus delaying diagnosis and treatment. The late diagnosis and "almost universal inadequacy of treatment" gave the impression that angina pectoris was totally and permanently disabling.

However, since then the entire approach to prevention and treatment has improved. Now nitroglycerin is given to prevent the pain, not just to stop it once it begins. Formerly as a last resort, some patients underwent thyroid gland surgery. Now similar effects may be obtained by using radioactive iodine. Moderate use of tobacco is no longer banned. With the improved techniques in anesthesia and surgery, patients can now undergo most major operations with safety. And they can even take plane trips, because of the development of pressurized airplane cabins and antimotion sickness drugs.

The designation of coronary disease and angina is no longer a stigma, Dr. Master said. Its presence generates caution, but not panic. Lighter work is now available for persons with heart disease. Unreasonable fear of heart trouble is on the wane, and people are no longer afraid to be seen leaving a cardiologist's office. In fact, "to discuss one's electrocardiogram is as acceptable as to discuss one's analyst."

However, until a specific prevention and treatment of coronary artery disease, and in turn angina pectoris, has been developed, general measures aimed at keeping the patient comfortable, at a reasonable weight, and free from tension remain of great importance.

"These measures together with a confident outlook will prolong the life of the patient. Thirty years hence it is likely that enzymes, hormones and other perhaps as yet unidentified biochemical agents will make angina pectoris a truly rare condition."

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Suggested Home Accident Prevention Activities

Home accident mortality and morbidity rates today present a serious national problem, one calling for planned and organized preventive action. Someone is permanently disabled by a home accident every four minutes. The underlying causes of home accidents can usually be traced to environmental hazards or unsafe actions, or a combination of both. To be effective, preventive measures must encompass the control or elimination of both types of causes. Health department responsibility in this field has been recognized by all leading public health organizations.

From the close relationship public health agencies enjoy with the individual and his home environment, it clearly follows that prevention of home accidents warrants the specific attention of state and local health departments. Important in this connection is the fact that public health personnel are trained in the fundamentals of disease prevention and can adapt these principles to accident prevention. Moreover, control measures are readily adaptable to normal health department programs. Essentially, prevention of home accidents must be regarded as an activity of the local health department. The Public Health Service and the State Department of Health can offer consultation and assistance in planning a control program but the actual work must be carried on at the local level. No one professional group in a health department can be solely responsible for the prevention of home accidents; the efforts and cooperation of every staff member are required.

The immediate objectives of health department workers must be the elimination from the home, so far as is possible, those conditions which cause accidents and the training of people to act in a safe manner within the home environment. The problems in this field do not differ materially from those involved in any public health program where specialized training of the professional staff is necessary. We must create public interest in the problem and then be ready to impart the "technical" information that is needed. Home safety concerns the health and welfare of everyone and a program of preventive measures should be a community project. A local safety council is an excellent body through which non-official group efforts can be organized. Its membership represents a cross-section of industry, traffic-safety interests, civic groups, youth organizations, farm groups, and others. The Red Cross, through programs of class instruction, can train volunteers for effective leadership in community home accident prevention activities. It may be necessary for the health departments to stimulate the interest of groups in home safety.

The following outline suggests activities that a local department may consider and adapt to the needs of the area concerned:

1. Tabulate and analyze existing records to determine the local problem. This can be done by reviewing home accident death certificates for the past five years. These cases can then be classified by age, sex, type of accident, and seasonal variations in accidents. An investigation of deaths due to home accidents will provide much information.
2. Use of the Home Accident Fatality Report, distributed by the National Office of Vital Statistics, is an excellent means of acquiring factual information. The public health nurse or the sanitarian may obtain the information to complete this form from family, physician, funeral director, medical examiner, or some other person who may have knowledge of the accident.
3. Promote reporting of home accidents through schools, hospitals, medical societies, industries, official agencies, service clubs, civic groups, and during routine home visits by members of the health department staff.
4. Make a routine epidemiological investigation of fatal and non-fatal home accidents reported from all sources.
5. Develop an in-service training program to acquaint all personnel with the problem: types and characteristics of home accidents, accident hazards and methods of eliminating them, causes of morbidity and mortality.
6. Participate in safety inspection of public buildings, including schools and hospitals.

7. Develop techniques with the local medical society whereby accident-prone individuals can be recognized and, if possible, treated by attending physicians. Arrangements might be made with mental hygiene or guidance clinics to refer such persons for study.
8. Special educational activities (in addition to the educational aspects of activities noted above):
   a) Secure the cooperation of other agencies having related interests, Welfare, Housing, Fire, Building, etc.
   b) Seek active support of civic and professional groups, architects, builders, manufacturers, home economists and other educators.
   c) Release stories of unusual accidents, warnings against seasonal accidents, statistics, etc. Obtain the interest and support of newspapers, radio and television stations, and of advertising agencies.

Monthly Report of the Bureau of Communicable Disease Control

	Dec. 1956	Dec. 1955	Jan.-Dec. 1956	Jan.-Dec. 1955
Brucellosis	1	0	32	30
Diphtheria	2	9	32	45
Hepatitis (Infectious)	34	37	486	1056
Measles	285	572	23996	4573
Meningococcal Infections	8	15	91	105
Meningitis (Other)	10	--	157	--
Poliomyelitis	10	11	229	336
Rabies In Animals	22	27	299	373
Rocky Mt. Spotted Fever	1	3	53	50
Streptococcal Infections	468	337	5790	6516
Tularemia	3	11	23	26
Typhoid Fever	2	4	58	48

Sculpture Tools Skin Planing

Tools used by sculptors to rough clay are now being used by doctors to smooth away acne scars. The tools are forged steel rasps having a central handle with variously shaped toothed working surfaces at each end. They are available at most sculpture supply houses. Another rasp, sold as a "corn and callus" instrument by notion stores, is also used.

Their use is the latest development in dermabrasion (skin planing) in which acne, chickenpox, smallpox and shingles scars can be removed, or at least improved, by abrading the scarred areas. Earlier techniques used sandpaper or revolving wire brushes.

Dr. Douglas Torre, a New York dermatologist, described the new technique and its use on 24 patients in the December Archives of Dermatology, an American Medical Association publication.

While the new technique is slower and requires more work by the doctor than the wire-brush technique, it is simpler, cheaper and less subject to mishap. It also has many advantages and none of the disadvantages of the sandpaper method.

In the new technique local anesthesia is injected into the area to be abraded. The rasps are used in a crisscross and circular motion. In the wire-brush method, the skin is "frozen" and then abraded with the motor-driven wire brush which is manipulated in short strokes. One advantage of the rasp method over the wire-brush technique is that the scarred area can be evaluated during the operation since the skin is not "frozen" by an anesthetic.

The results in the 24 patients varied from an estimated 20 to 75 per cent improvement in appearance of the skin. One patient was treated by sandpaper, wire brush and rasp on different occasions with no "appreciable difference" in the end result. On eight occasions the wire brush was used initially and the rasp was used later to even out the abraded area and shade off the edges. In fact, Dr. Torre usually uses both the rasp and wire brush, preferring the wire-brush technique when large areas are to be done, and the rasp for smaller areas and for "finishing off" after using the wire brush.

Dr. Torre is on the staff of the New York Hospital and Cornell University Medical Center.

The Medical Society of Virginia . . . .

Delegates to the American Medical Association

Your delegates to the American Medical Association Convention in Seattle, November 27-30, left Chicago on the Northwest Airlines Stratocruiser, and after being in the air for quite a while, were notified that we would not land in Seattle but in Portland, Oregon, due to the "California Smog" which the people in Washington stated they never had before. But, after a midnight ride from Portland to Seattle (4½ hours), we finally arrived at the Olympic Hotel at 2:00 A. M.

Often one hears that the American Medical Association is run by the Board of Trustees or a clique. This is entirely false, and we trust that many of you will avail yourselves of the opportunity to see the House of Delegates in session at the New York meeting in June 1957. When a delegate from any state presents a resolution, it is given a number and is read before the entire House at the first meeting, after which it is referred to a reference committee. Any member of the A.M.A. is permitted to attend this meeting of the House of Delegates but is not allowed the privilege of speaking on the floor which is reserved for delegates. However, when the resolution is considered by the reference committee, the next day, any member, whether he be a delegate or not, is allowed to speak as much as he wishes, for or against the resolution. The reference committee then votes whether to accept the resolution as is, or reject it, or recommend something different to the House. It is then presented to the House by the reference committee to be voted on. Here, any delegate may speak on the motion before a vote is taken.

Registration at the Seattle meeting exceeded all conservative expectations. The total registration was 6,282, which included 2,813 physicians. The highest physician registration was from Seattle, of course, with 878. Washington State followed with 805, Oregon 190, and California 154. Virginia had 6 registrations.

Medical ethics, veterans medical care, radio-active isotopes, continuance of the A.M.A. interim session, hospitalization for patients with alcoholism and a report of the Committee on Medical Practices were among the wide variety of subjects acted upon by the House of Delegates.

Dr. Edward M. Gans of Harlowton, Montana, was named as the 1956 General Practitioner of the Year. Dr. Gans, who is 80 years old, has practiced medicine for 51 years and has been in Harlowtown for the past 44 years.

Strongly condemning government intervention in medicine, Dr. Dwight H. Murray, of Napa, California, A.M.A. President, told the opening session that "the medical profession, along with business and industry, is caught between those who desire to promote sound government programs and those who desire even more intensely to perpetuate party politics. Unfortunately, in recent years, a benevolent federal government appears more attractive to the voting public than the preservation of individual freedoms. Medicine must do its utmost to reverse this trend."

Subject of greatest interest was the proposed ten-section revision of the Principles of Medical Ethics originally submitted at the June 1956 Annual Meeting in Chicago, where final action was deferred until the Seattle session. The proposed short version of the Principles was re-submitted, with some changes based on suggestions received since last June by the Council on Constitution and By-Laws. The House of Delegates, however, decided to refer the matter back to the Council on Constitution and By-Laws for further study and consideration. The reference committee report adopted by the House included the following statements: Careful consideration was given to the Preamble and the ten sections of the proposed Principles. The Preamble and seven of the ten sections appear to be acceptable in their present form.

Sections 6 and 7 were not acceptable as presented, either to the group which appeared at the hearing or to your reference committee. Out of the general discussion the reference committee received the crystalized opinion that at least four more areas needed more specific attention in Sections 6 and 7. These are: 1. Division of fees; 2. The dispensing of drugs and appliances; 3. The corporate practice of medicine; and 4. Greater emphasis concerning the relationship between physicians and patients.

In addition, the reference committee felt that the wording of Section 10 could be improved if amended to read as follows: "The responsibilities of the physician extend not only to the individual but also

to society and deserve his interest and participation in activities which have as their objective the improvement of the health and welfare of the individual and the community.

In view of the above, your reference committee believes that the proposed Principles of Medical Ethics should be referred back to the Council on Constitution and By-Laws for further study and consideration. Also the committee recommended that this study be completed at least six weeks prior to the June session and the new version be published in the Journal in order that all interested physicians might have an opportunity to comment thereon.

The House revised A.M.A. policy on veterans medical care by endorsing in principle the following, suggested by the Council on Medical Service: With respect to the provision of medical care and hospitalization benefits for veterans in Veterans Administration and other federal hospitals that new legislation be enacted limiting such care to veterans with peacetime or wartime service whose disabilities or diseases are service incurred or aggravated.

This action eliminates the temporary exceptions which were made in the June, 1953, policy regarding wartime veterans who are unable to defray the expenses of necessary hospitalization for non-service connected cases of tuberculosis or psychiatric or neurological disorders. In making the policy change, the House approved this supplementary statement: We recognize the laws and administrative extensions of the law that are now in operation. We feel that under the circumstances it will be to the best interests of the public in general, and veterans in particular, if medical societies, county and state as well as national, develop committees to assist in guaranteeing VA hospital admission to service connected cases. While the present law exists, we should help assure that veterans whose illness constitutes economic disaster will not be displaced by those suffering short-term remediable ills which, at the worst, constitute financial inconvenience.

In another action concerning veterans, the House passed two resolutions condemning as unlawful the practice of Veterans Administration hospitals which admit patients who are covered by workmens compensation insurance or by private health insurance and render bills for the cost of their care. Both resolutions requested the A.M.A. to take action to bring about a discontinuance of such practices by VA hospitals, and each of them instructed the Association Secretary to obtain from each State testimony or records of each known case that violates VA Regulation 6047 D1.

The House rescinded that June 1951 action which limited the hospital use of radium and radioactive isotopes to a board certified radiologist. It approved the following: 1. In any hospital in which a patient is to receive radium or the products of radium or artificially produced isotopes, there should be a duly appointed Committee on Radium and Artificially Produced Radioisotopes of the hospital professional staff. This committee should include, but not necessarily be limited to, the following qualified physicians: a radiologist, a surgeon, an internist, a gynecologist, an urologist and a pathologist. This committee should have available such competent consultation of other physicians and scientific personnel as may be required. Where this is not practicable, the hospital staff should consult the nearest Committee on Radium and Artificially Produced Radioisotopes. 2. The use of Radium and Isotopes for diagnostic or therapeutic purposes shall be restricted to qualified physicians so judged by this Committee of the professional staff. 3. It is recommended that procurement, storage, dosimetry control and inventory of all radioactive isotopes for the use of the hospital staff and radiological safety control be centralized, and where administratively possible, centralization to be located in the Department of Radiology. 4. It is recommended that the Board of Trustees assign to the appropriate council or committee the continuous study of the problems of radiological safety control in the use of the radium and its products and artificially produced radioactive isotopes for diagnostic or therapeutic purposes.

Rejecting a resolution which recommended discontinuance of the interim sessions or clinical meetings, the House adopted a reference committee report as follows: We believe that the interim sessions should be continued because of the public relations value of these meetings to the Association and the educational value to physicians and the general public in the various geographical areas involved.

The House recommended that a statement be brought to the attention of the Council on Medical Education and Hospitals, the Joint Commission on Accreditation of Hospitals and the American Hospital Association to include the following: The Council on Mental Health urges hospital administrators and the staffs of hospitals to look upon alcoholism as a medical problem and to admit patients who are alcoholics to their hospitals for treatment, such admission to be made after due

examination, investigation and consideration of the individual patient. Chronic alcoholism should not be considered as an illness which bars admission to a hospital, but rather as qualification for admission when the patient requests such admission and is cooperative. The chronic alcoholic in an acute phase can be, and often is, a medical emergency.

In approving a progress report of the Committee on Medical Practices, the House amended one of its directives to read as follows in order to remove any legal objections: The A.M.A. representatives on the Joint Committee on Accreditation of Hospitals be instructed to stimulate action by that body leading to the warning, provisional accreditation, or removal of accreditation of community or general hospitals which exclude or abitrarily restrict hospital privileges for generalists as a class regardless of their individual professional competence where such policies adversely affect the quality of patient care rendered. Any action taken should be only after appeal to the Commission by the county medical society concerned. The House also approved a recommendation that a study group be formed to consider the best background preparations for general practice, and it urged that such action be implemented as soon as practicable.

Vincent Archer, M.D.
W. Linwood Ball, M.D.
Delegates

Highway Safety

Two American Medical Association publications have challenged physicians to be more than just doctors to injured motorists—to become leaders in the whole field of road safety.

An editorial and article in the October 27th A.M.A. Journal and a guest editorial in the October A.M.A. Archives of Internal Medicine outlined the role of physicians in the fight against a "disease" that is killing persons at the rate of one every 14 minutes and injuring someone every 25 seconds in the U.S.

Success in meeting the problem of ever-increasing injury and death on the highways will require the cooperation of "the best minds in medicine, highway engineering, and car design."

Physicians may be the logical leaders in a coordinated movement because of their biological science background and their intimate knowledge of crash effects and problems of human behavior that might figure in smashups, the Journal article quoted Dr. Fletcher D. Woodward, Charlottesville, Va., as saying. He is chairman of the A.M.A.'s new committee on medical aspects of automobile injuries and deaths. In fact, the more some physicians look into traffic safety the more they seem to see the possibility of a new medical specialty, which one general practioner has suggested be called "medicotrafficology."

Dr. Jacob Kulowski, St. Joseph, Mo., said in the Archives that all branches of medicine and surgery must cooperate in both the treatment and prevention of auto accident injuries. Physicians who have observed the seriousness of some auto injuries should turn their attention to accident prevention through better medical standards of driver licensing and the maintenance of driver fitness. They should take a more active interest in medico-legal problems resulting from accidents, he said.

The Journal editorial pointed out that doctors can help reduce accidents by approving and supporting necessary research and by furnishing information to automotive designers on injuries, survivals, and deaths.

Physicians have a responsibility to prevent injury to individual patients, the editorial said. They must warn persons not to drive after taking drugs with a sedative effect, and that conditions such as severe pain or itching, while not direct accident hazards, can produce disturbances that may divert a driver's attention.

In addition, physicians can promote a sense of civic responsibility by supporting sound traffic safety programs and safety councils in their local communities, the editorial concluded.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Home Health Emergencies. A Guide to Home Nursing and First Aid in Family Health Emergencies. Medical Department, The Equitable Life Assurance Society of the United States. New York. 1956. 256 pages.

Low-Fat Cookery. By EVELYN S. STEAD and GLORIA K. WARREN, Dietitian. With an Introduction by Eugene A. Stead, Jr., M.D., and James V. Warren, M.D. Illustrated by Frank Sieminski. The Blakiston Division, McGraw-Hill Book Company, Inc., New York. 1956. xv-184 pages. Cloth. Price $3.95.

Educating Spastic Children. The Education and Guidance of the Cerebral Palsied. By F. ELEANOR SCHONELL, M.A., Ph.D., Formerly Research Fellow, University of Alabama, Department of Pediatrics and Child Health. Philosophical Library, New York. 1956. xv-242 pages. Cloth. Price $6.00.

Sleep. By MARIE CARMICHAEL STOPES, Doctor of Science, London; Doctor of Philosophy, Munich; etc. Philosophical Library, New York. 1956. 154 pages. Cloth. Price $3.00.

Principles of Clinical Electrocardiography. By MERVIN J. GOLDMAN, M.D., Assistant Chief of the Medical Service and Cardiologist, Oakland Veterans Administration Hospital, Oakland; Assistant Clinical Professor of Medicine, University of California, School of Medicine. Lange Medical Publications, Los Altos, California. 1956. 310 pages. Illustrated. Price $4.50.

Practical Pediatrics Dermatology. By MORRIS LEIDER, M.D., Associate Professor of Dermatology and Syphilology, New York University Post-Graduate Medical School; Visiting Physician, Bellevue Hospital; etc. St. Louis, The C. V. Mosby Company. 1956. 433 pages. With 280 photographs and 13 drawings. Cloth. Price $10.50.

Bone Structure and Metabolism. Ciba Foundation Symposium. Editors for the Ciba Foundation—G. E. W. Wolstenholm, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston. 1956. xii-299 pages. With 121 Illustrations. Cloth. Price $8.00.

Paper Electrophoresis. Ciba Foundation Symposium. Editors for the Ciba Foundation—G. E. W. Wolstenholme, O.B.D., M.A., M.B., B.Ch., and Elaine C. P. Millar, A.H.-W.C., A.R.I.C. Little, Brown and Company, Boston. 1956. 224 pages. With 74 Illustrations. Cloth. Price $6.75.

The Philosophy of Medicine. By WILLIAM R. LAIRD, M. D. Education Foundation, Inc., Charleston, West Virginia. 1956. 64 pages. Price $3.00.

The Patient Speaks. Mother Story Verbatim in Psychoanalysis of Allergic Illness. By HAROLD A. ABRAMSON, M. D., Associate Attending Physician and Chief of the Allergy Clinic, The Mount Sinai Hospital, New York City; Research Psychiatrist, Biological Laboratory, Cold Spring Harbor; etc. Vantage Press, New York. 1956. xxi-239 pages. Cloth. Price $3.50.

Bone Structure and Metabolism. Ciba Foundation Symposium. Editors for the Ciba Foundation—G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston. 1956. xii-299 pages. With 121 Illustrations. Cloth. Price $8.00.

This is a comprehensive report of an international conference held by the Ciba Foundation in London in 1955. These meetings have become noted for their informality, and this carries over into the published proceedings.

As in previous Ciba Foundation Symposia much of interest also can be found in the lively discussions stimulated by the research reports. These discussions are presented in full, and provide additional speculation and argument. Recent studies and comments on bone, vitamin D, calcium, phosphorus and parathyroid hormone are included.

L. D. Abbott, M.D.

Miscellaneous . . . .

Sheltering Arms Hospital

Sheltering Arms Hospital has for many years meant just that, "sheltering arms" to a great number of Virginia citizens who are unable to pay for hospitalization, all of whom are referred by their family doctors. Upon arrival, patients are made to feel that it is *their* hospital and the attending physician *their* own personal physician. At Sheltering Arms a patient has the benefit of consultation, x-ray studies and laboratory investigation equal to that available in private hospitals, and all at no cost to the patient. A patient also receives nursing care which is as good as that found in any hospital in the Commonwealth. Major surgery is performed and diagnostic problems are handled by a number of the most competent physicians in Richmond who charge no fee for their services.

Although the State of Virginia has an active Welfare Department to provide free medical care for the completely indigent, there are many borderline cases which do not qualify under the state welfare program, and it is for these individuals that Sheltering Arms performs its invaluable services. This is particularly true in the case of prolonged illness in a family of less than average income, and for the patient whose term of illness has exhausted his hospitalization insurance. Free hospitalization at Sheltering Arms in these instances often prevents the proverbial "straw that broke the camel's back".

The Hospital serves the entire State of Virginia. From October 1955 to October 1956, Sheltering Arms cared for 925 patients from the counties and 703 patients from the City of Richmond. Of these cases, 394 were major surgical, 176 were minor surgical, and 376 were medical. The cost to the Hospital per patient is as follows:

For one day	$ 13.77
For one week	96.39
For one year	5,012.28

The cost of supplying and maintaining linen on one bed for a single year is $150.00.

In view of present day costs it is surprising that Sheltering Arms can continue to operate on a free basis. The budget for the coming year is $290,000. The amount of $154,500 is expected from the following sources: the endowment income, from City of Richmond and County health funds, and from interested organizations. For the difference of $135,500, Sheltering Arms is dependent entirely upon the generosity of the public. The Hospital has been operating with a deficit for the past six years.

Recently, through a mutual exchange of facilities, many modern technical diagnostic aids have been made available to Sheltering Arms Hospital patients by the Medical College of Virginia. The facilities of the Medical College blood bank are also available to Sheltering Arms. Each patient is requested as part of the application requirement to have one pint of blood donated at the Medical College of Virginia in his or her name. If this patient does not need the blood, the pint is added to the overall credit of Sheltering Arms. Referring physicians are asked to encourage this blood program and to emphasize the importance of donating the initial pint of blood.

This, then is a brief look at Sheltering Arms as it functions today, the only completely free general hospital in Virginia and unique among hospitals of the world. It is hoped that all physicians of the state will lend their support, cooperation and good will.

HAROLD W. FELTON, M.D.

Editor's Note: The above account of the unique contribution made by the Sheltering Arms Hospital to the citizens of Virginia was prepared by Dr. Felton at the request of the Woman's Auxiliary to The Medical Society of Virginia. Dr. Felton was resident at the Hospital but is now located for practice at Deltaville, Virginia.

Heart Fund Campaign

Plans for launching the 1957 Heart Fund campaign in Virginia February 1 to raise $325,000 are nearing completion, Ted Dalton, Radford, state campaign chairman, has announced. The campaign continues through February. A total of $236,000 was raised last year.

The Virginia Heart Association and its chapters are affiliated with the American Heart Association. These groups combine forces to sponsor heart research, education, and community services.

In Virginia, the Heart Fund is supporting research projects at the Medical College of Virginia and at the University of Virginia School of Medicine. Also, the Heart Fund is supporting cardiovascular fellowships in internal medicine at these two institutions. The fellowship at the Medical College of Virginia is held by Dr. H. Page Mauck, Jr., Rich-

mond, and the one at the University of Virginia is held by Dr. Ceilous Williams. A fellowship in cardiovascular surgery at each of these centers has been established to begin July 1 of this year.

As is well known in the medical profession, research has made notable advances over the heart diseases, and significant gains have been made in diagnosis, care, and treatment of patients suffering from many forms of these diseases. Dramatic progress has been made through surgery to correct defects of the heart and its great vessels.

Through the various educational programs the results of research are passed on to the public. Through the Heart Association's program of professional education, new knowledge about the heart diseases is made available to physicians and members of related professional groups for the benefit of heart disease sufferers.

The Virginia Heart Association conducts cardiac nursing institutes to provide nurses current professional information on various phases of cardiovascular diseases. Monthly and quarterly professional publications are sent to more than 1,100 physicians and to medical schools, schools of nursing, hospitals, and medical libraries throughout Virginia.

Heart associations are bringing to physicians through their medical societies, leading speakers in the cardiovascular field. Under this program, Dr. Paul Dudley White was sponsored at the last annual Scientific Session of the Virginia Academy of General Practice.

Physicians and physician groups may borrow professional education aids from Heart associations.

Through its program of public education, the Heart Association seeks to eliminate needless fears and misconceptions. It encourages early diagnosis and treatment.

The benefits of research are brought to individuals through community heart programs as well as through their physicians. These programs are designed to protect healthy hearts and to enable heart sufferers to live as useful and productive members of society.

Hospital Beds

The number of general hospital beds in the United States increased by 200 per cent from 1909 to 1955, and now there are 4.2 beds for every 1,000 persons in the nation, according to Health Information Foundation. In 1909 the ratio was 2.5 beds per 1,000 persons.

In the December issue of its monthly statistical bulletin, *Progress in Health Services,* the Foundation points out that "general hospital facilities are coming ever closer to the 4.5 per 1,000 ratio traditionally considered a standard measure of need."

In 1940, according to the bulletin, 19 states were below the national average of 3.5 beds per 1,000 population, and 39 states were under the accepted standard of 4.5. Last year, 21 states were below the national average of 4.2 and 29 under the 4.5 ratio.

"What would seem to be of greater significance, however is that in 1940, 14 states had less than 3 general hospital beds per 1,000 population (3 states had less than 2 beds per 1,000), but by 1955, none of the states had less than 3 beds per 1,000 population."

The Mountain States, with an average of 4.9 beds for every 1,000 persons, rank above both the nationwide and standard ratios, the bulletin reports, and "stand in striking contrast" to the East South Central States where the ratio is only 3.2. Utah and Mississippi have the fewest hospital beds—3.1 per 1,000 population.

Differences in bed-population ratios, the Foundation reports, are related to degree of urbanization, per capita income and community development. By counties, for example, the number of beds in general hospitals and nursing homes tends to increase in accordance with per capita income.

Current Currents

THE SIX-YEAR-OLD DOCTOR DRAFT ACT will expire July 1, and, barring any new emergency, the Defense Department has announced it will not ask Congress for an extension. Instead, the Defense Department plans to ask for an amendment to the regular draft to provide for the selective call up of doctors under age 35 who have been deferred to complete their education. These physicians have an obligation under the regular draft for two years of service unless exempted for specific reasons.

Meanwhile, to encourage young doctors to take their military training after leaving medical school and possibly elect to make military medicine a life-time career, the services are sponsoring intern and residency training programs. Under this special deferment plan, doctors promise active service at a later date.

THE WORLD MEDICAL ASSOCIATION and the Health Resources Advisory Committee of the Office of Defense Mobilization have asked the AMA and its constituent societies to do everything possible to help Hungarian physicians entering this country after fleeing their homeland. In a letter to all members of the United States Committee, Dr. Louis H. Bauer, Secretary General of the WMA, requested that every effort be made to find places of "useful employment for Hungarian refugees with medical qualifications".

The Health Resources Advisory Committee adopted a resolution, urging "every American health organization and educational institution to make every effort to lend its aid and resources toward the reestablishment of our new professional colleagues in situations commensurate with their professional status. . . . To the dignity of political and personal freedom, let us help give them the dignity of professional status."

Medical societies have been requested to ascertain whether any Hungarian physicians have come into their communities and, if so, plan some program for them so that their professional talents will be utilized in the most effective way possible.

PHYSICIANS ARE OFTEN ASKED just what scholastic average is necessary for a student to enter medical school. According to a recent report by the AMA, 13.6 per cent of the students who entered the nation's 76 approved four-year medical schools during the 1955-56 academic year had a "C" college grade average.

Over a six-year period, 70.6 per cent of the entering students had a "B" average while, over the same period, about 15.8 per cent had the enviable "A" average.

The report explained that "College academic achievement as measured by scholastic records is only one factor among many utilized in the selection of medical students."

THE CHAMBER OF COMMERCE OF THE UNITED STATES is about to launch a unique legislative project of interest to physicians. A team of experts, headed by National Chamber President John S. Coleman, will strike out across the country in February aboard a chartered plane, spurring business men and professional people into more intensive action on issues before the new Congress.

Mr. Coleman states "We intend to take national issues to be dealt with in the 85th Congress to the doorsteps of the people themselves, all over the nation." He goes on to say "We want to give them a clear understanding of these issues, to explain their background, and to demonstrate why it is in the interest of everyone to organize and be prepared to present their views and recommendations as the issues claim the attention of Congress."

Many of the issues to be discussed at these all-day meetings affect medicine and the profession. Programs up for discussion and study include the Hoover Commission recommendations; government in the health insurance business, either directly or indirectly; social security; government spending, and taxes—subjects of vital interest to medicine.

QUESTIONNAIRES to determine the scope of activity in various areas—including public education, community service, society projects, meetings, personnel and finances —will be distributed early this year by the American Medical Association to all county medical societies. This fifth biennial survey of county medical society activities is being undertaken by the Council on Medical Service and the Department of Public Relations with the assistance of other AMA departments. More than 1,200 county societies supplied information for the 1955 survey, and it is hoped that an even larger number will complete the 1957 questionnaire.

SEVERAL NEW FILMS are now available to component societies. The President's Committee for Traffic Safety has announced release of eight new films which explain the importance of the Action Program to reduce traffic accidents. The purpose of the program is to map out exactly how everyone, including physicians, can effectively support a well-planned drive to reduce traffic accidents. The films and a descriptive folder can be obtained from the President's Committee for Traffic Safety, General Services Building, Washington 25, D. C.

The third of the Upjohn closed-circuit TV programs is also available. This one covers the borderlines of cancer (problems in the management of doubtful lesions) and a progress report on an oral hypoglycemic agent. Inquiries should be addressed to P. O. Box 2710, Washington, D. C.

CONTRIBUTE NOW TO THE
AMERICAN MEDICAL EDUCATION FOUNDATION

Woman's Auxiliary....

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Richmond.

The annual Christmas party of the Auxiliary to the Richmond Academy of Medicine was held at the home of Mrs. W. Linwood Ball on December 14th. Mrs. William F. Grigg, Jr., and Mrs. George Snead were co-chairmen in charge of the arrangements and tea. Mrs. Theodore R. Mack was chairman of flower arrangements. Toys were collected to be distributed to needy children through the Child Welfare Agency.

Edith B. Brooks
Publicity Chairman

From the Publications Chairman.

I am happy to tell you I have had greetings and news from the following State Auxiliaries since the last issue of the Virginia Medical Monthly—Arizona, Colorado, Utah, Rhode Island, New York, Tennessee, South Dakota, and Georgia. I am including an article, borrowed from a quote in the Utah News Bulletin of March, 1955, entitled "The Life of a Doctor's Wife—An Art and a Career".

Virginia Drewry McG. Pearson
Publications Chairman

The Life of a Doctor's Wife—An Art and a Career.

Public Relations start with the individual. Each one of us is engaged in public relations 24 hours a day. We, as doctor's wives, are the picture windows through which the public views the profession. There is no detour around public attitude. It is discouraging at times to realize how prone the public is to pounce on doctor's families for their frailties. You do not speak as yourself, but as the doctor's wife, to be quoted, or misquoted, according to the charitability and intelligence of the quoter.

Being a doctor's wife is both an art and a career. Our program is one of education and cooperation—education of ourselves, cooperation with our community. We should ask ourselves, "Are we courteous? Are we thoughtful? Are we interested in others? Are we willing to do more than our share in volunteer work? Are we informed in the needs of our community? Can we intelligently discuss civic problems? Do we use common sense and always exhibit good manners? Do we remember to do that extra something that always wins us friends?" As the Greeks said, "Know yourself", the Romans, "Be yourself", the Christians, "Give yourself".

New Multiple Patch Test

Two dermatologists have described a new technique requiring only an elastic bandage, several gauze squares and old x-ray film, for running at least 10 simultaneous patch tests for allergies.

Dr. Raymond A. Osbourn, Washington, D.C., and Dr. Thomas W. Tusing, Vienna, Va., said in the American Medical Association's December Archives of Dermatology that their multiple patch method is rapid, convenient, and uncomplicated.

They use an elastic bandage 18 to 20 inches long, which is cut into strips and to which gauze squares are attached, giving it a gridiron appearance. Test materials—creams, saturated felt pads or pieces of cloth—are applied to the gauze squares. Open spaces between the squares keep the test materials from spreading.

The whole bandage is placed on the upper arm and held in place with adhesive tape or a self-sealing gauze requiring no tape.

The doctors also make a chart with which to read the results of the tests. The chart is something like the cut-out key used to grade intelligence tests. The chart made from an old x-ray film, has openings cut to fit the outline of the gauze squares of the bandage. After removing the bandage, the plate is placed over the area covered by the bandage and the skin contact areas are easily located.

Correspondence . . . .

The Fluoridation Hassle.

To the Editor:

In your editorial entitled "The Fluoridation Hassle" you referred to me and to the Association of American Physicians and Surgeons. Since your information was incomplete and inaccurate, I appreciate the opportunity of correcting any misinterpretation and misunderstanding which your fourth paragraph may have created.

Since the membership of AAPS includes, and always has included, many outstanding members of the American medical profession (all AMA members), I feel it grossly incorrect and totally unjustified to refer to the Association and this writer in the same paragraph with certain cultists. To emphasize the impropriety of this implication, I will list a few of our members with whom you may be personally acquainted.

Dr. Clyde H. Frederickson, Past President of Montana Medical Association.

Dr. Fount Richardson, President, Arkansas Medical Association.

Dr. L. H. McDaniel, Past President, Arkansas Medical Association.

Dr. M. O. Rouse, President, Texas Medical Association.

Dr. Charles L. Farrell, President, Rhode Island Medical Association.

Dr. A. P. Peeke, President, South Dakota Medical Association.

Dr. T. C. Terrell, Past President, Texas Medical Association.

Dr. C. E. Umphrey, Past President, Michigan Medical Society.

Dr. John K. Glen, AMA Texas Delegate and Past President, Harris County (Houston) Medical Society.

Dr. Louis M. Orr, Chairman, AMA Committee on Federal Medical Services and Vice Speaker, House of Delegates of AMA.

Dr. Donald B. Koonce, President, North Carolina Medical Association.

Dr. William H. Prioleau, President, South Carolina Medical Association.

Dr. Donald Cass, California Delegate to AMA.

Dr. Ralph W. Jack, Past President, Florida Medical Association.

Dr. John R. Fowler, Past President, American Academy of General Practice.

Dr. William B. Hildebrand, Past President, American Academy of General Practice.

Dr. Cyrus W. Anderson, President, Denver County Medical Society and Former Director, American Academy of General Practice.

Dr. James F. Kelly, Past President, Nebraska Medical Association.

Dr. Warren F. Bernstorf, Past President, Kansas Medical Association.

Dr. Denton Kerr, President-Elect, Texas Medical Association.

Dr. Fred W. Wittich, Past Secretary, International College of Allergy.

Dr. Amos R. Koontz, President, The Association of Military Surgeons of the United States.

Dr. Edwin L. Zander, Past President, Louisiana Medical Association.

Dr. Samuel J. McClendon, San Diego AMA Delegate.

Dr. Edward M. Gans, Harlowton, Montana, General Practitioner of the Year of AMA.

Dr. Paul Davis, Past President, Ohio State Medical Association.

Dr. Herbert Salter, Past President, Ohio Academy of General Practice.

I could add many, many others. I am certain you do not care to place them in the same classification (which is done by referring to the Association in the same paragraph) with the Illinois Chiropractic Association.

The resolution to which you refer is based upon the principles set forth in the Code of Medical Practice adopted by the AAPS, as a statement of principle upon which all actions are evaluated. The resolution to which you referred deals with principle, not with any scientific evaluation.

I regret you did not know about the AAPS. Many very outstanding Americans know the organization well. Our annual meetings have been addressed once or more by each of the following, as well as by many other extremely outstanding citizens.

Governors

J. Bracken Lee of Utah
Hugh White of Mississippi
Dan Thornton of Colorado

Senators

Robert A. Taft of Ohio
Allen J. Ellender of Louisiana
Herbert R. O'Conor of Maryland

Carl T. Curtis of Nebraska
Everett McKinley Dirksen of Illinois
John W. Bricker of Ohio
Edwin C. Johnson of Colorado
John L. McClellan of Arkansas
William E. Jenner of Indiana

Representatives

Ralph W. Gwinn of New York
B. Carroll Reece of Tennessee

Other Outstanding Speakers

Dr. Louis Alesen, Past President, California State Medical Association.
Dr. George S. Benson, President of Harding College.
Leonard E. Read, President, Foundation for Economic Education.
Dr. Clarence Manion, Former Dean of Notre Dame Law School.
John T. Flynn, noted author and libertarian.
Dr. Melchoir Palyi, economist and author.
Arthur L. Conrad, President of Heritage Foundation.
Willis E. Stone, President, American Progress Foundation.
Brig. Gen. Bonner Fellers, National Director of For America.
Corinne Griffith, Repeal of the 16th Amendment.
George N. Craig, Past National Commander of American Legion.
Dr. Richard L. Meiling, Director of Medical Service, Department of Defense (1950).
Thurman Sensing, Executive Vice President, Southern States Industrial Council.
Dr. F. A. Harper, Economist, Foundation for Economic Education.
Frank Chodorov, Editor of The Freeman, author of many books and articles.
Dr. E. Merril Root, author, Professor of English Literature, Earlham College.

These men know AAPS well and think it is doing a good job.

We do not deserve the implied discredit by the fact that you could not find the AAPS listed in the AMA Directory. As you know, the AMA Directory lists scientific organizations. The AAPS does not deal with scientific matters which are more than adequately covered by the AMA, State, County and Specialty scientific organizations. AAPS confines its activities to socio-economic, legislative and public relations matters as they involve the medical profession and the American public as a whole.

Membership is entirely voluntary. Only physicians eligible for membership in the AMA may join. We have thousands of members scattered through every state, in every principal city and town.

I regret that a sincere attempt was not made to contact me or the central office of the Association. My name is listed in the Directory. Had this been done, a gross injustice as well as much misunderstanding and misinterpretation could have been avoided.

An opportunity to inform you and your subscribers more fully about the organization would be appreciated.

With kindest regards, I remain

James L. Doenges, M.D.
Immediate Past President of the Association of American Physicians and Surgeons, Inc.

Editor's Note: The editorial referred to appeared in the October issue of the Virginia Medical Monthly. The Illinois Chiropractic Society and the Association of American Physicians and Surgeons were mentioned in the same paragraph solely because of the fact that to the knowledge of the writer they were the only organizations that had taken a stand in opposition to fluoridation. The writer assumed from the name of the organization that the Association of American Physicians and Surgeons was a scientific body. Dr. Doenges' communication states that this is not true. The writer regrets that he was not aware of this when the editorial was prepared. He continues to believe, however, that decisions on matters of health and disease prevention should be made on the basis of scientific knowledge.

Editorial....

The American Medical Education Foundation

"WHAT DOES IT cost to educate a man? Far more than the tuition a student must pay. The difference must come from those who recognize the value of higher education and who, by their support, invest in its continuance and in our way of life."

The above quotation referred to education generally. What would the author have said about medical education—the most expensive form of higher training? The medical school consumes, on an average, 30 to 40% of the budget of the parent university, yet it enrolls less than 10% of the students. The tuition paid by the medical student defrays only one-fifth of the costs of his education. Where is the remaining four-fifths to come from?

The Medical Society of Virginia has been fortunate in having an active committee soliciting funds for the A.M.E.F. under the chairmanship of Dr. Marcellus A. Johnson, III, of Roanoke. It must be remembered that those physicians who contribute to the support of medical schools are also making an additional contribution toward improved public relations for the profession.

Last year Dr. James P. King, President of The Medical Society of Virginia, made an analysis of the contributions by Virginia physicians to the A.M.E.F. in 1955 as compared to the eleven other southern states to the south and west of Virginia. The figures for the first five in each category were as follows:

Amount of Contributions (A.M.E.F. and Alumni)

1.	North Carolina	$57,640.65
2.	Texas	41,845.09
3.	Virginia	24,999.10
4.	Florida	24,357.87
5.	Alabama	12,482.00

Number of Contributors

1.	Texas	1494
2.	North Carolina	1162
3.	Florida	697
4.	Virginia	608
5.	Kentucky	535

Contributions Per Physician by States

1.	North Carolina	14.73
2.	Virginia	6.85
3.	Florida	4.79
4.	Kentucky	4.79
5.	Texas	4.78

Per cent of Physicians Contributing by States

1.	North Carolina	30%
2.	Kentucky	20%
3.	Virginia	17%
4.	Texas	17%
5.	Florida	15%

It is noteworthy that although Virginia did not lead in any of the above compilations, this State did not fall below the upper one-third in any category. Nationally The Medical Society of Virginia was one of nine state societies to receive the Award of Merit, given by the Board of Directors of the A.M.E.F. for outstanding gifts of time or money.

In a recent letter to Dr. King, the Executive Secretary of the A.M.E.F., John W. Hedback wrote, in part, as follows:

"It may be of interest to you to know that Virginia is ahead as of October 31 substantially this year in comparison with 1955. On October 31 of 1955 the A.M.E.F. had processed $5830.00 from physicians in Virginia. On October 31 of 1956 Virginia physicians have contributed $7504.00 through the A.M.E.F. to the medical schools."

This sum no doubt was increased materially during the last three months of 1956 and does not include direct alumni contributions which totalled $16,089.10 in 1955.

Our position is improving but there is ample room for a broader and more generous participation by the physicians of Virginia. That we still are dragging our feet is shown by the fact that each of our two medical schools in 1955 received more than the total amount donated by all the physicians in Virginia.

Our schools need our help. Contribute through the A.M.E.F.

H.J.W.

Radiation Hazard: Fact or Fantasy?

IT TOOK the fury of the atomic bomb to bring to the attention of non-radiologic medical and lay circles what had been of concern to the modern radiologist from the first day of his training to that last day when he permanently lays aside his apron and goggles: the potential harm of ionizing energy. But, like the chain reaction, this newly found interest of others could get out of hand.

Rumblings have been heard in the medical literature about the development of malignancies from benign conditions in the bones, female pelvis, etc., that had been previously treated by x-ray. The rumblings have become louder with the recent reports of development of thyroid cancer and leukemia following by many years the modest irradiation of thymic "enlargement" and other benign states of childhood. While a direct causal relationship is hard to prove rigorously, such reports by competent observers should cause one to stop and reflect.

The significantly higher incidence of leukemia in radiologists as opposed to other physicians has been known for years. There is now good evidence that the radiologist's life is considerably shorter than that of other physicians, and not because of his susceptibility to the diseases usually considered "post-exposure", such as leukemia and cancer, but *all causes of death.*

There can be no question about it: ionizing radiation is nothing but destructive in varying degrees, certainly genetically, but probably also in non-germinal tissues as well. Any upper limit of safe exposure as offered by our special learned societies is nothing more than an informed guess, so far has our knowledge of the physical sciences outstripped the biological. Any limit offered today is subject to revision, probably downward, tomorrow. No one can deny the possibility that generations yet unborn will contain vast numbers, even the majority, of dyskinetic, driveling defectives, with eventual domination by a few whose progenitors were the hill-dwellers of today who had no traffic with the city and all its magic.

As opposed to this horrendous speculation for the future on the one hand, we see the life-saving actualities of the roentgen-ray every day on the other. Two intact generations since Conrad Roentgen might afford us some little comfort about the

future. The prudent course would demand the more intelligent use of the ray, rather than its avoidance. It would be senseless to have a patient die from cancer of the colon by avoiding a barium enema so that he could transmit untouched germ-plasm to his descendants. It would be imprudent to use less artfully traumatizing radiation therapy with its permanently injured tissues, in place of the more artfully traumatizing surgery with essentially complete *restitutio ad integram* of the tissues, if both methods were equally effective. The desiderata of the medical use of ionizing radiations are two: (1) such procedures be necessary for the patient's welfare and not to satisfy medical curiosity, and (2) such procedures be done under the best of circumstances.

What are the best of circumstances in diagnostic radiology? The well-conceived radiologic exploration in the well-prepared patient eliminates unnecessary examinations, both initial and repeated. The conception must be bilateral: let the clinician consult with the radiologist about his problem. Two things ensue from such a policy. (1) a more rational radiologic approach to the patient with economy in number of roentgens, and (2) an increased yield per roentgen expended because the radiologist's intellectual appetite has been whetted.

The responsibility of the user of x-ray equipment to spare the roentgens to himself and the patient is large. It has been estimated that only about one in thirty of the professional users of x-ray apparatus have special and comprehensive radiological training.

Probably the fluoroscope is the greatest of all disseminators of unnecessary roentgens. It is only a matter of time when all x-ray departments will have image amplifiers that will greatly reduce this hazard. However, as now constituted, the fluoroscope is a cheap, easy to operate apparatus, and provides a satisfactory "gimmick". Only those should use it who have knowledge of the effects of target-skin distance, filtration, milliamperage, field-size and voltage; who are willing to take at least one-half hour from a busy day to adapt the eyes satisfactorily every time they use the machine, rather than to resort to increasing the milliamperage.

The fluoroscope supplies primarily data on dynamics and function, and is not to be regarded as a cheap and convenient substitute for acquiring the anatomic detail of the radiograph.

Necessary radiography can be made safer radiography by strict coning, use of added filtration, higher voltages, low milliampere-seconds, and shielding of the gonads whenever possible. Radiography should be in the hands only of those who understand these principles. Possibly, mass surveys should be re-evaluated in respect to the relation of yield and exposure.

In short, this is a plea for meeting intelligently the roentgenophobic neurosis that can envelope us.

CHRISTIAN V. CIMMINO, M. D., F. F. R.

Society Proceedings . . . .

Arlington County Medical Society.

New officers for this Society for 1957 are: President, Dr. K. Charles Latven; president-elect, Dr. T. A. McGavin; vice-president, Dr. Stephen J. Sheehy; secretary, Dr. W. Leonard Weyl; treasurer, Dr. W. Leete Stone; and member-at-large, Dr. Hermann F. Diamant.

Fredericksburg Medical Association.

Dr. John Rose has been elected as president of this Association for 1957. Other officers are Dr. Lloyd Moss, vice-president, and Dr. C. P. Barnett, secretary-treasurer.

Medical Society of Northern Virginia.

This Society met on December 11th in Strasburg, under the presidency of Dr. H. P. Maccubbin, Winchester. A discussion of Physicians Liability Insurance was given by Mr. James Alexander, Agent for St. Paul Mercury Indemnity Company, and Mr. Robert I. Howard, Executive Secretary of The Medical Society of Virginia. Dr. William B. Crawford, Woodstock, gave a case presentation of two gastric lesions. Dr. George J. Baylin, Duke University, was the guest speaker, his subject being "X-ray in Diagnosis of Abdominal Disease".

Officers elected for 1957 are: President, Dr. M. J. W. White, Luray; vice-president, Dr. Fred Maphis, Strasburg; and secretary-treasurer, Dr. D. P. McCarty, Front Royal.

Richmond Academy of General Practice.

At the meeting of the Academy on January 14th, Dr. Richard W. Crossen succeeded Dr. Charles G. Young as president. Other officers elected are: president-elect, Dr. Charles L. Williams; vice-president. Dr. Wayne C. Campbell; secretary, Dr. A. A. Houser, Jr.; and treasurer, Dr. Fleming W. Gill. Elected to the Board of Trustees were Dr. William C. Gill, Jr., and Dr. William P. Morrisette.

The Hampton Roads Orthopedic Society

Held its regular meeting on December 10th at the Portsmouth Naval Hospital. Interesting case reports were presented and discussed. Dr. A. S. Stephenson presented a thirty years old white female who had an injury to her hip at eleven years of age and fusion at the age of twelve. He also presented a case of osteoblastic lesion of the proximal humerus with co-existing subdeltoid bursitis. Dr. J. S. Thiemeyer presented the case of a ten year old male who had chondromalacia of the patella of the knee. Dr. V. L. Purlia gave a case of a fifty year old male who had calcification of the distal six inches of the femora and proximal parts of the tibiae. Dr. A. A. Kirk presented the case of a corn picker hand with transmetacarpal amputation and avulsion of the skin of the palm and dorsum.

Seaboard Medical Association.

At the annual meeting of this Association held in Rocky Mount, N. C., the first week in December, Dr. George Carroll, was elected president. Other officers are: vice-presidents, Dr. Everett Sawyer, Elizabeth City, N. C., Dr. Howard Masters, Richmond, Dr. John R. Chambliss, Rocky Mount, and Dr. Henry Gardner, Franklin; and secretary-treasurer, Dr. James M. Habel, Jr., Suffolk.

The next annual meeting of this Association will be held in Suffolk the first week of September.

News Notes . . . .

Calendar of Coming Events

American Medical Association—12th National Conference on Rural Health—Brown Hotel, Louisville, Kentucky—March 7-9.

American College of Surgeons—Sectional Meeting—The Sheraton-Park Hotel, Washington, D. C.—March 18-21.

American Academy of General Practice—1957 Annual Scientific Assembly—Kiel Auditorium, St. Louis, Missouri—March 25-28.

National Society for the Prevention of Blindness—Annual Conference—Hotel Statler, New York City, N. Y.—April 7-10.

American College of Physicians—38th Annual Session—Boston, Massachusetts—April 8-12.

American Trudeau Society—52nd Annual Meeting—Kansas City, Missouri—May 6-9.

Virginia Academy of General Practice—7th Annual Scientific Assembly—Hotel Roanoke, Roanoke—May 24-26.

American Medical Association—Annual Meeting—Waldorf-Astoria Hotel—New York—June 3-7.

The Medical Society of Virginia—Annual Meeting—Hotel Shoreham, Washington, D. C.—October 27-30.

New Members.

Since the list published in the January issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

William Agee Cook, Jr., M.D., Lynchburg
William Swindell Credle, M.D., Bristol
Ward Cleveland Curtis, M.D., Bucks, Ala.
Theodore Granger Denton, M.D., Richmond
Charles Ross Duncan, M.D., Radford
George Fred Elsasser, M.D., Portsmouth
John William Giesen, M.D., Radford
Joseph Livingstone Glick, M.D., Staunton
Nicholas Helu, M.D., Front Royal
Frank Imboden Hobbs, M.D., Lynchburg
Thomas Richards Johns, II, M.D., Charlottesville
Matthew Lyle Lacy, II, M.D., South Hill
William Andrew MacIlwaine, M.D., Waynesboro
Robert M. McDonald, M.D., Harrisonburg.
Dennis Alfred James Morey, M.D., Richmond
Levi Old, Jr., M.D., Charlottesville
Lonis L. Schurter, M.D., Galax
James Lawrence Stringfellow, M.D., Bristol
Samuel Nimrod Whitacre, M.D., Winchester

Dr. Showalter Honored.

Dr. Joseph T. Showalter, Christiansburg, has been named Southwest Virginia's Man of the Year for 1956. He received the award in a special broadcast over Radio Station WRAD, the sponsoring agency.

Portrait Unveiled.

A painting of Dr. O. L. Ramsey, beloved Gretna physician, was unveiled at the Ramsey Memorial Medical Center on December 9th. Described as the last of the "horse-and-buggy" doctors of his section, Dr. Ramsey devoted more than forty-five years of professional service to his community. The Memorial Medical Center was started in 1954 and completed the following year and the portrait will hang in the reception hall.

Salem Rescue Squad.

Drs. Shelton Carey, Russell Smiley and F. B. McKinney, Jr., have been elected as medical advisors to the Salem Rescue Squad.

Diagnostic Use of Radioiodine.

A one-week intensive course in the "Diagnostic Use of Radioiodine (I-131)" will be given March 18-22, at Georgetown University Medical Center, Washington, D. C. This course, open to authorized physicians, will meet AEC qualifications for diagnostic I-131. Further information may be obtained from Dr. B. J. Duffy, Jr., Georgetown University Hospital, Washington 7, D. C.

Dr. G. B. Setzler,

Pennington Gap, has been appointed district chairman of finance of the Jefferson Forest Boy Scouts.

Virginia Council on Health and Medical Care.

At the annual meeting held in Richmond, January 7th, Mr. Ed P. Phillips was elected president; Dr. Benjamin W. Rawles, Jr., first vice-chairman; Dr. William N. Hodgkin, second vice-chairman; Mrs. Maynard M. Emlaw, secretary; and Dr. R. Blackwell Smith, Jr., treasurer.

Dr. Ira L. Hancock,

Creeds, has been appointed by Governor Stanley to the State Hospital Board. The appointment, subject to confirmation by the General Assembly, is for the unexpired term ending June 30, 1959.

Dr. Andrew F. Giesen

Has been elected president of the Radford-Montgomery Chapter of the Virginia Society for Crippled Children and Adults.

Waynesboro Community Hospital.

Officers for the medical staff of this Hospital are: Dr. William A. MacIlwaine, president; Dr. S. R. Penn, vice-president; Dr. J. Powell Anderson, treasurer; and Dr. Beverley J. Loesch, secretary.

Lynchburg General Hospital.

Dr. Phillip R. Bryan has been elected chief of staff of this Hospital for the coming year.

Staff Members Named.

Dr. G. Edward Calvert has been elected president of the staff of Marshall Lodge Memorial Hospital and Guggenheimer Memorial Hospital, Lynchburg. Dr. Powell G. Dillard, Jr., was named vice-president, and Dr. Edward Stoll, secretary.

Mary Washington Hospital.

Dr. C. A. Nunnally, Fredericksburg, has been named president of the medical staff of this hospital; Dr. E. R. Ware, vice-president; and Dr. T. Stacey Lloyd re-elected secretary-treasurer. Dr. C. V. Cimmino was named as the representative to the hospital Board of Managers.

Dr. Elizabeth B. Sherman,

Front Royal, has been elected vice-president of the Warren County Chapter of the Virginia Society for Crippled Children and Adults.

Virginia Baptist Hospital.

Dr. Frank Buck has been named chief of staff of this Lynchburg Hospital, with Dr. Holcomb Hurt as assistant chief of staff. Dr. Robert Brickhouse is secretary. Drs. Lloyd Agnew, Earl Owen, and Robert Brickhouse were named as directors.

Dr. John W. Devine, Jr.,

Lynchburg, has been elected State Director of the Babe Ruth League baseball program by Virginia's 14 leagues.

New Commissioner of Mental Hygiene and Hospitals.

Dr. Joseph Barrett has resigned as State Commissioner of Mental Hygiene and Hospitals and will become superintendent of Eastern State Hospital, Williamsburg. Dr. Hiram Wilson Davis, Huntington, W. Va., has been appointed by Governor Stanley as the new Commissioner. He will assume office on the 1st of February. Dr. Davis is a graduate of the Medical College of Virginia and formerly lived in Richmond and Williamsburg, having gone to West Virginia in 1950.

Dr. Barrett, who resides in Williamsburg and had been commuting to Richmond, held the position of superintendent of Eastern State Hospital before coming Commissioner in 1946.

Dr. Edward E. Haddock,

Richmond, has been elected as oriental guide of the Acca Temple, Ancient Arabic Order of the Nobles of the Mystic Shrine.

Dr. William Bickers,

Richmond, has been presented "an award of appreciation in recognition of meritorious service" by the Virginia Division of the Salvation Army. He has given twenty years of voluntary obstetrical service to the Evangeline Booth Home and Hospital where he is chief of the staff.

Dr. E. G. Gill,

Roanoke, has returned from New York where he took an intensive course in Corneal Transplant Surgery given by Dr. Ramon Castroviejo at the New York University Postgraduate Medical School.

Annual Scholarship Contest.

The Foundation of the American Society of Plastic and Reconstructive Surgery announces the Eighth Annual Scholarship Contest. Two prizes of $1,000 and $750 will be awarded to the two best essays upon original research in plastic surgery to plastic surgeons who have been in practice less than five years. Two other awards, consisting of silver plaques, will be awarded to the best research in plastic surgery by (1) a plastic surgeon who has been in practice more than five years, and (2) a researcher outside the field of plastic surgery.

For full information, write Dr. Clarence Straatsma, President, 5 East 83rd Street, New York City.

American Board of Obstetrics and Gynecology.

The next scheduled examinations (Part II) oral and clinical for all candidates will be conducted at the Edgewater Beach Hotel, Chicago, by the entire Board from May 16 through 25. Formal notice of the exact time of each candidate's examination will be sent him in advance of the examination dates.

Candidates who participated in the Part I examinations will be notified of their eligibility for the Part II examinations as soon as possible.

Inter-American Medical Convention.

The Second Inter-American Medical Convention will convene at the Hotel El Panama, Panama City, Republic of Panama, April 3-5. The program will be wide in scope and on the order of a state medical convention in the United States. Speakers will be from North and South America and all papers will be translated into both English and Spanish.

For further information, write to Dr. William T. Bailey, Chairman of the Convention Executive Committee, Box O, Ancon, C. Z.

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Obituaries . . . .

Dr. Guy Rothwell Fisher,

Prominent physician of Staunton, died January 15th. He was a native of New Hope, Augusta County, and sixty-seven years of age. Dr. Fisher graduated from the Medical College of Virginia in 1912, following which he received a M. S. degree in eye, ear, nose and throat treatment from Columbia University Medical School. He was a prominent Mason and was a past illustrious potentate of Acca Temple, Ancient Arabic Order of the Mystic Shrine at Richmond. Dr. Fisher had been president of the staff of Kings Daughters Hospital in Staunton.

Dr. Fisher was well known in medical circles in the State, having served as President of the Augusta County Medical Society and the Medical Society of the Valley of Virginia. He was President of The Medical Society of Virginia in 1948 and had always taken an active part in the affairs of the Society, serving on the Council and on numerous committees. Dr. Fisher was the "politician" of the Society and it was just understood that he would be chairman of the nominating committee at each annual meeting. Everyone knew him and everyone loved him—a smile and a handshake were always ready at any and everytime you saw him.

Dr. Murray Dick,

Newport News, died November 30th, at the age of fifty-two. He was a graduate of the Medical College of Virginia in 1932. Dr. Dick limited his practice to Ear, Nose and Throat. He had been a member of The Medical Society of Virginia for twelve years.

Dr. Joseph Lyons Miller,

Thomas, West Virginia, died January 6th, at the age of eighty-one. He was a graduate of the former University College of Medicine, Richmond, in 1900.

Dr. Miller was well known in Virginia and more particularly in Richmond, as it was the presentation of his collection of rare medical books and other items which formed the nucleus of the Library of the Richmond Academy of Medicine. His portrait was presented to the Academy in 1949. He was a a member of the Virginia Historical Society and a student of the history of the Virginias and Kentucky.

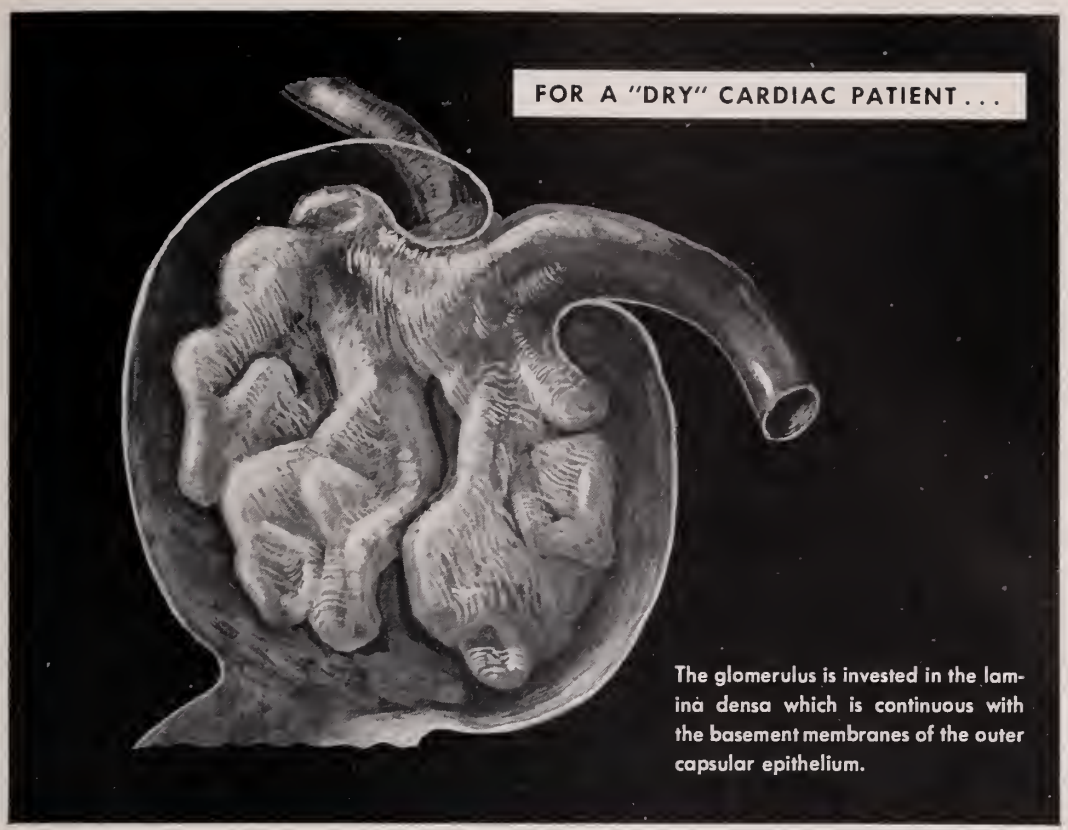


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Research in the Service of Medicine.

1. Asher, G.: Personal communication, June 23, 1956.
2. Settel, E.: A Clinical Evaluation of a New Oral Diuretic, Rolicton, Postgrad. Med., Feb. 1957, in press.
3 Goldner, M. G.: Personal communication, June 29, 1956.

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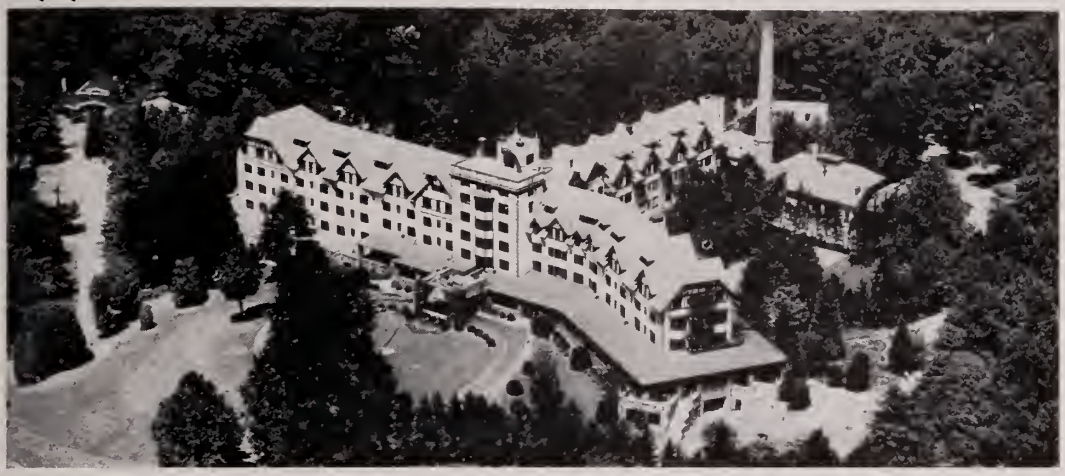
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The State Board of Medical Examiners of Virginia

The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, June 12, 1957. The examinations will be held in the same hotel June 13, 14, and 15, 1957, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 28, 1957. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S.W., Roanoke, Virginia.

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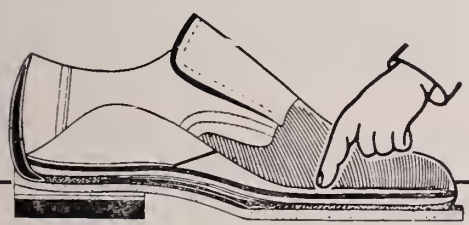
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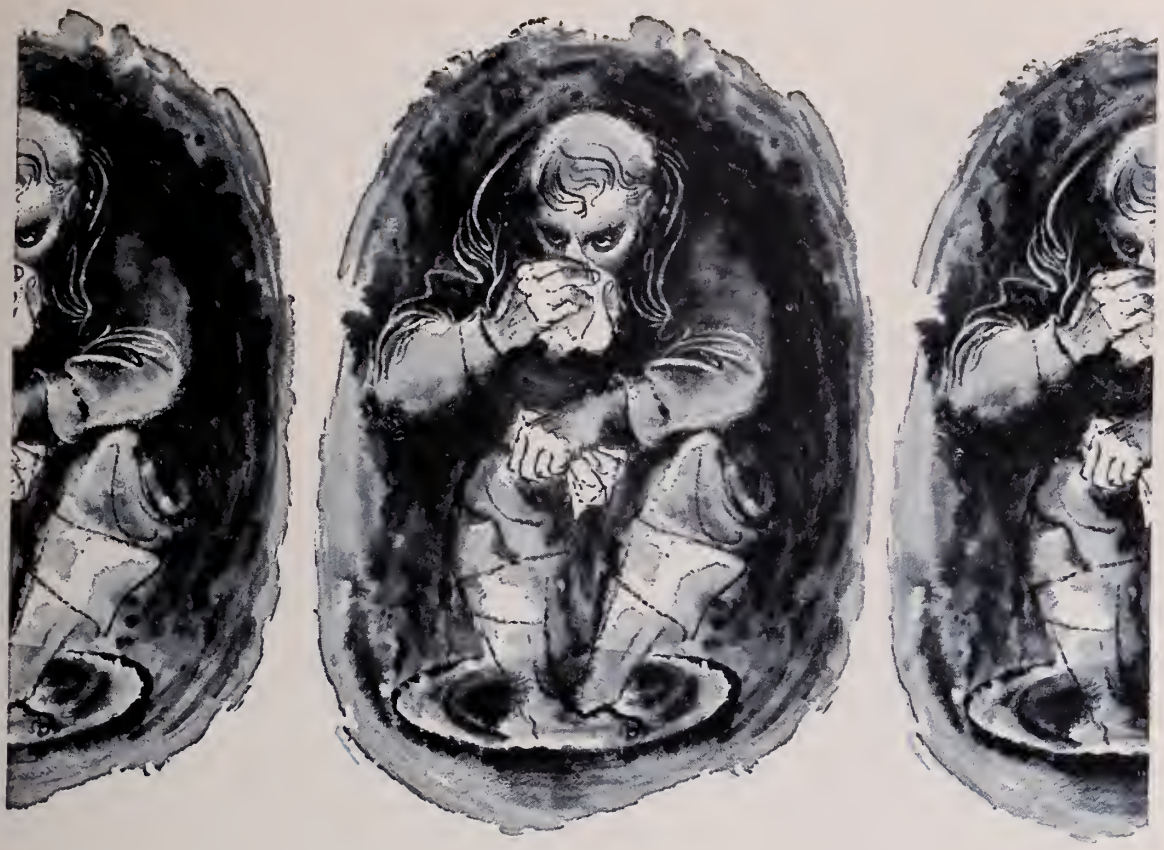
1. The Food Exchange Lists referred to are based on material in "Meal Planning with Exchange Lists" prepared by Committees of the American Diabetes Association, Inc., and The American Dietetic Association in cooperation with the Chronic Disease Program, Public Health Service, Department of Health, Education and Welfare.



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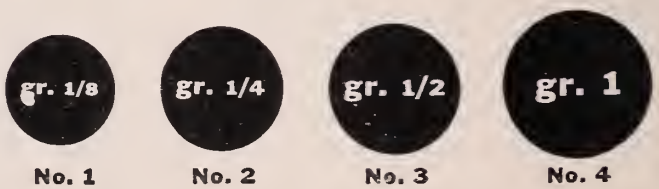
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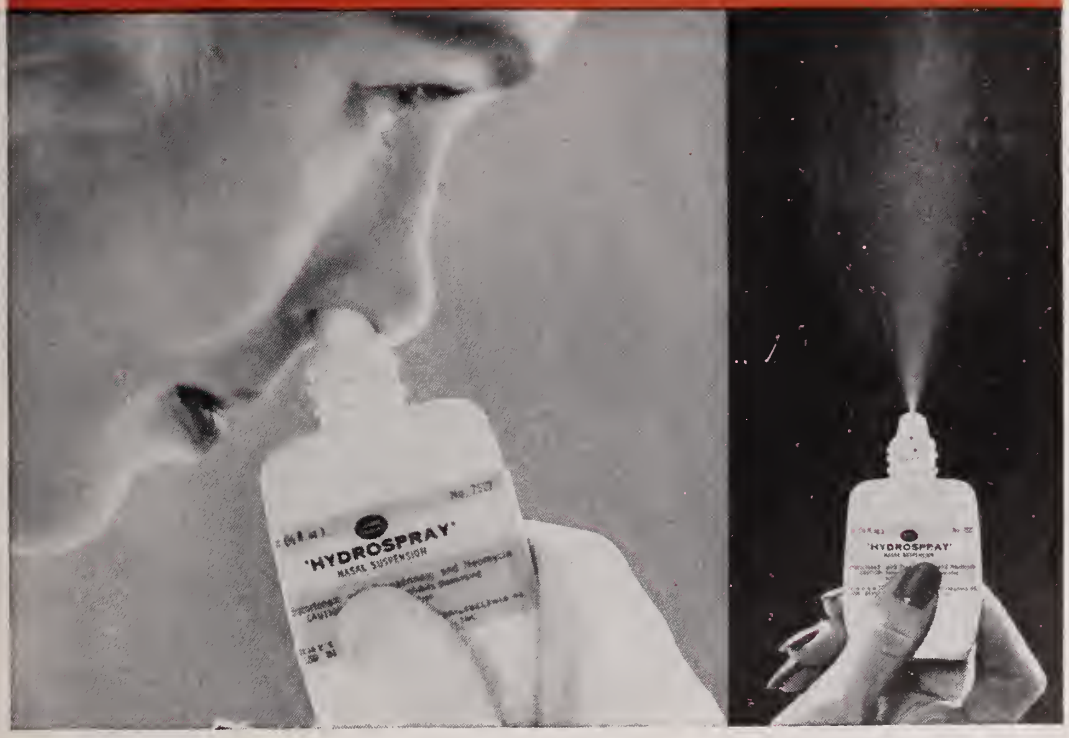
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REFERENCE: 1. Silcox, L. E., *A.M.A. Arch. Otolaryng.* **60**:431, Oct. 1954.

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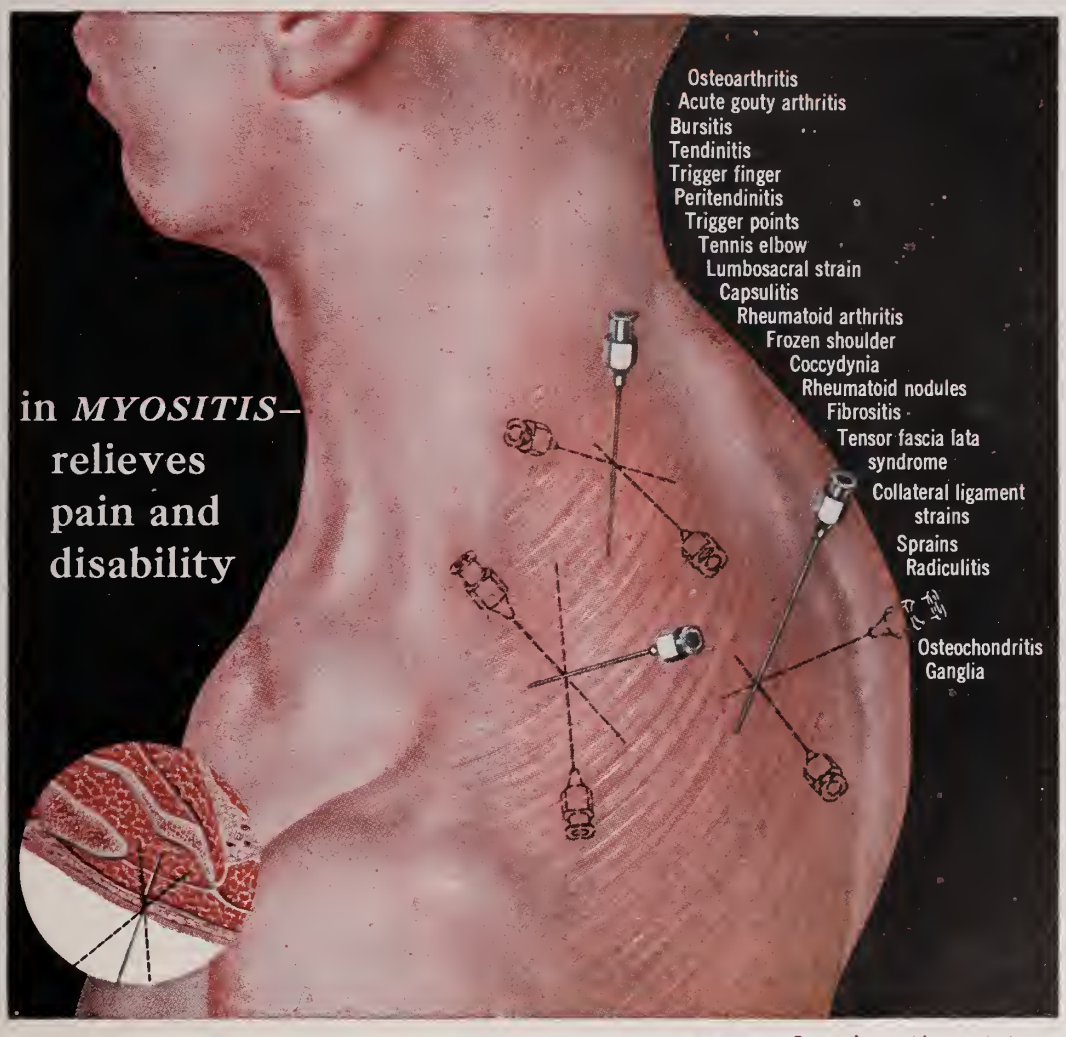
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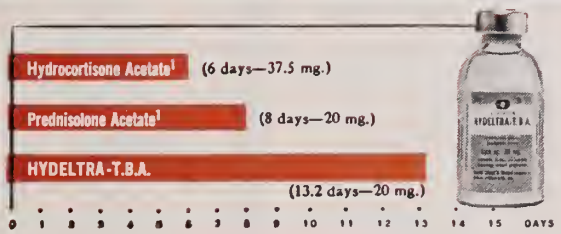
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1. Hollander, J. L., *Paper read at conference in New York City, May 31 and June 1, 1955*

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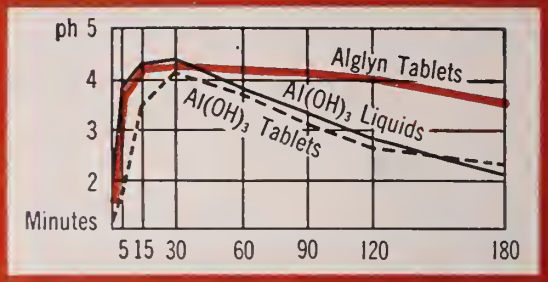
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1. Rossett, N.E. and Rice, M.L., Jr.: Gastroenterology, 26:490, 1954.
2. Hammarlund, E.R. and Rising, L.W.: J. Am. Pharm. Assoc., Scientific Edition, 38:586, 1949.

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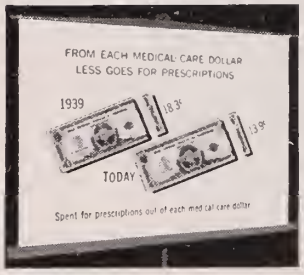
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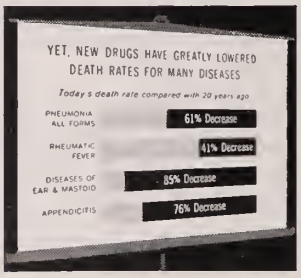
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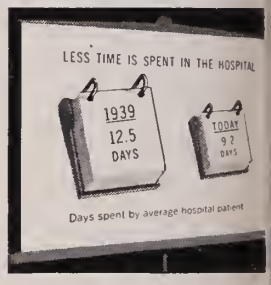
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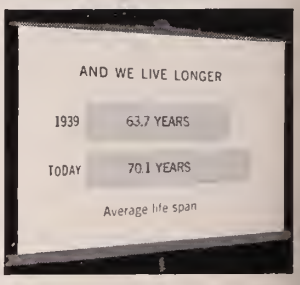








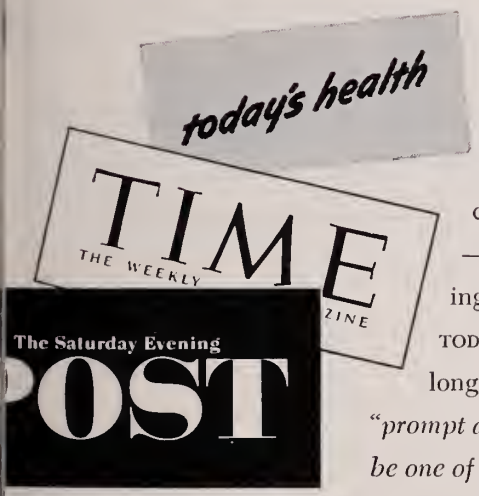
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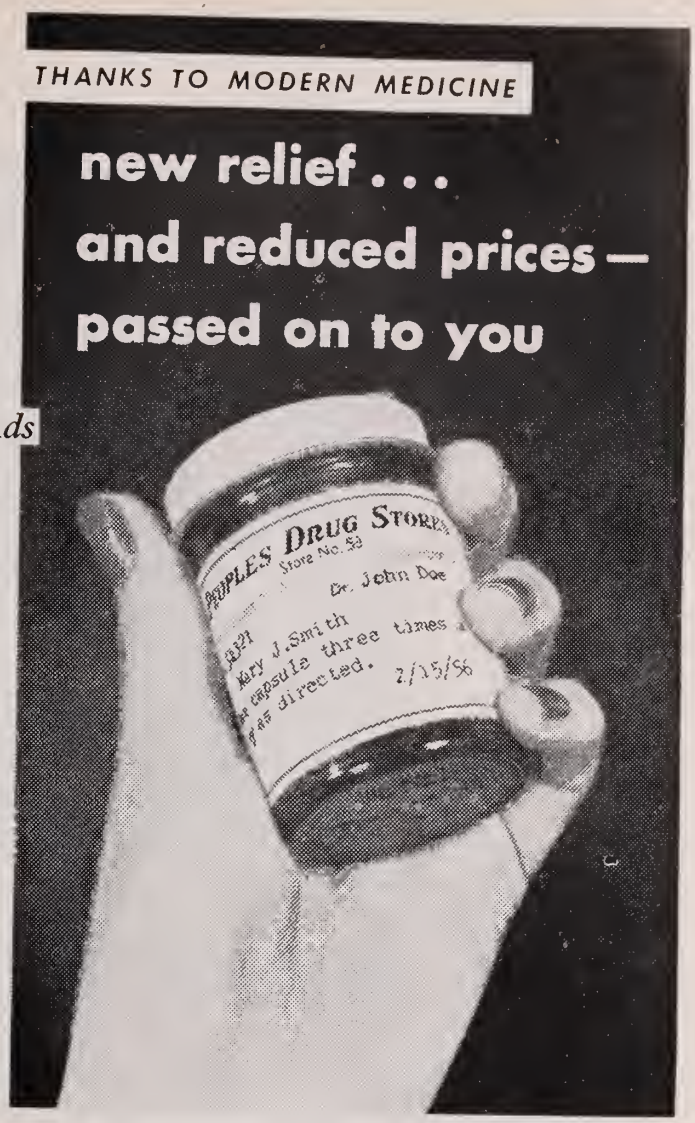
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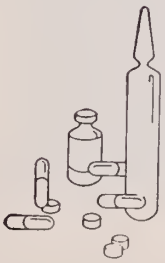


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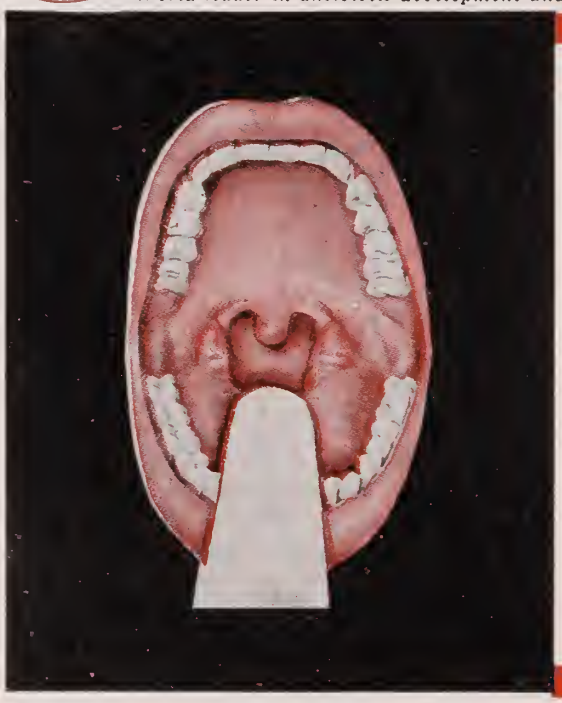
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1. Carter, C. H., and Maley, M. C.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 51.



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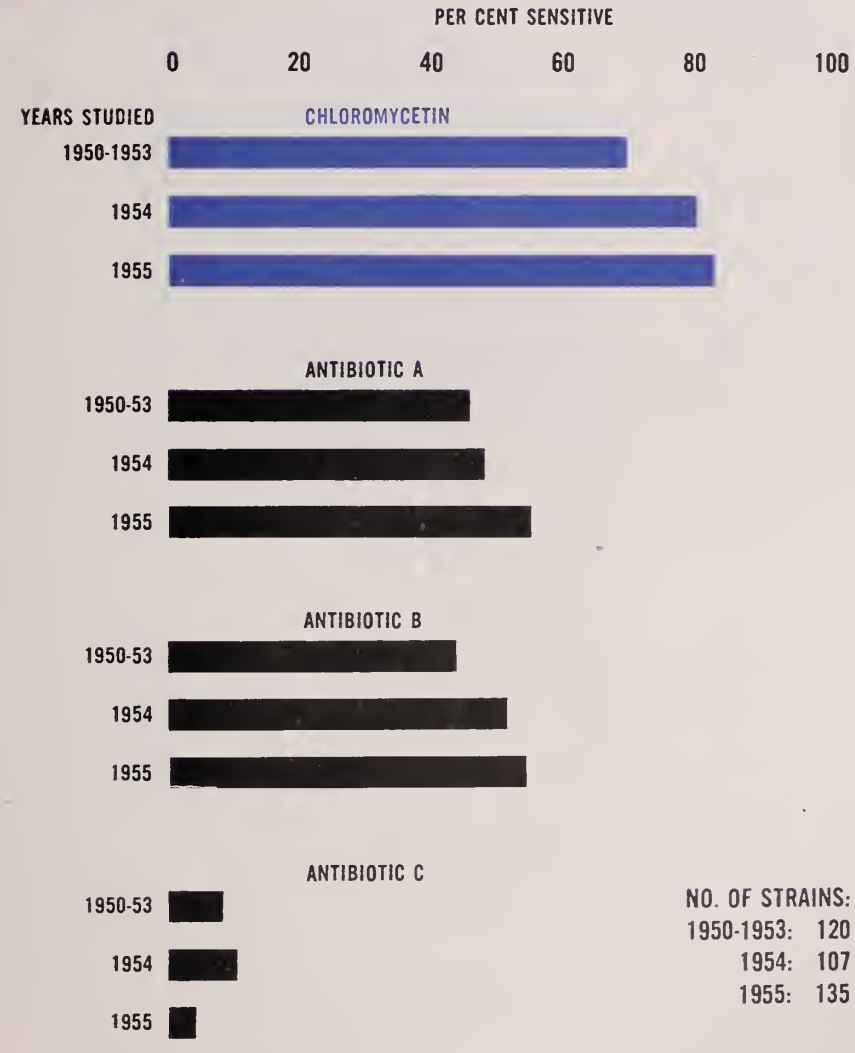
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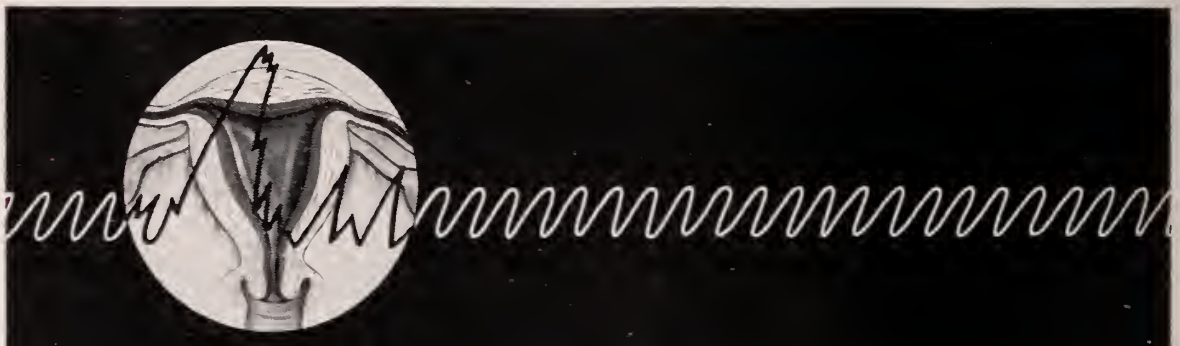
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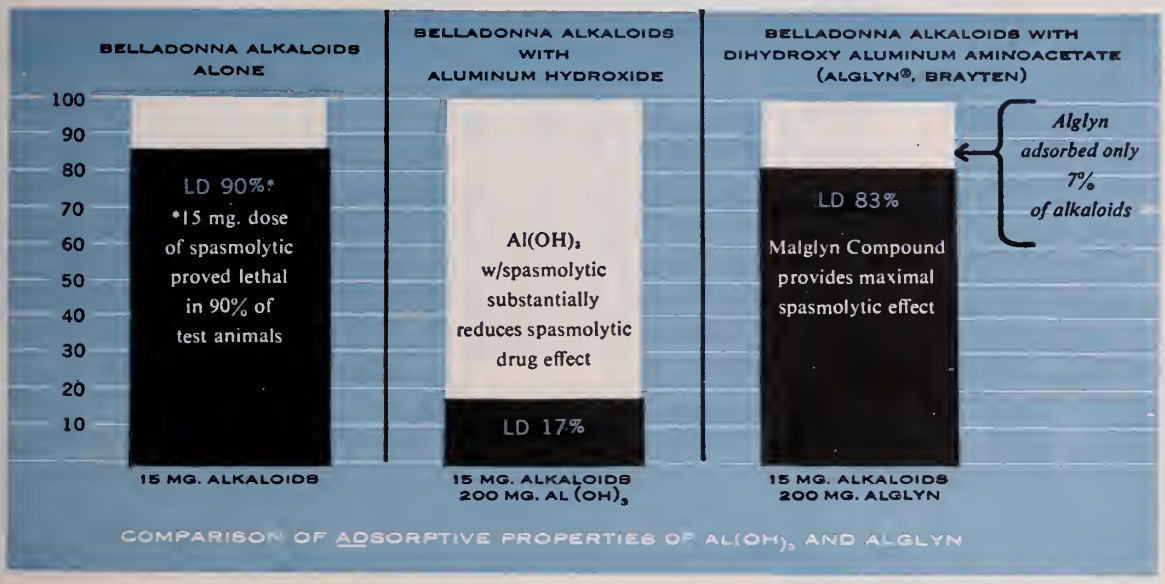
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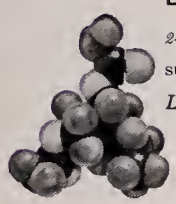
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1. Locket, S.: Brit. M.J. *1*:809 (Apr. 2) 1955.

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2. Wright, W.T., Jr., et al.: J. Kansas M. Soc. *57*:410 (July) 1956.

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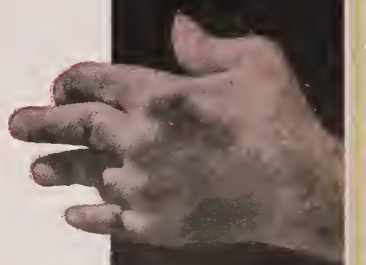
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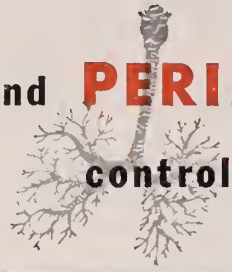
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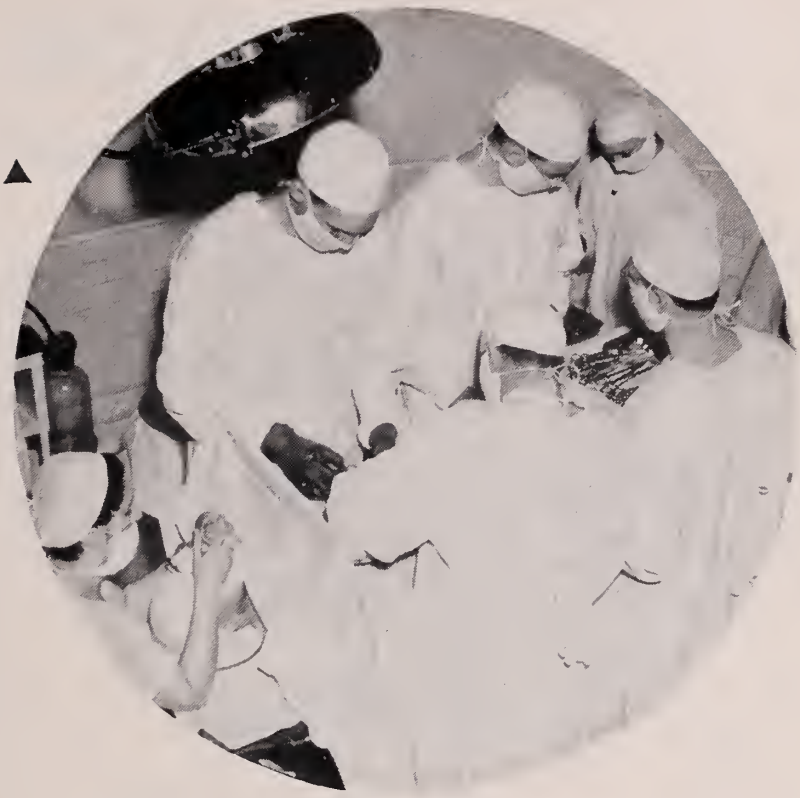
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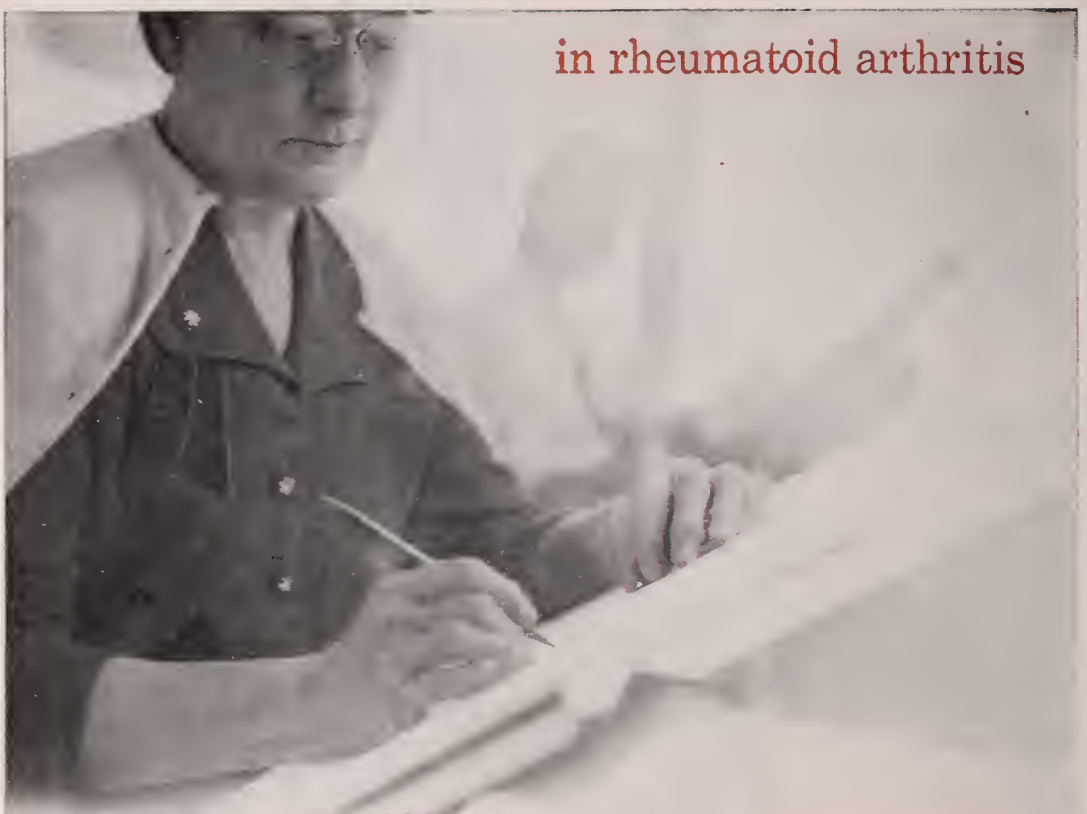
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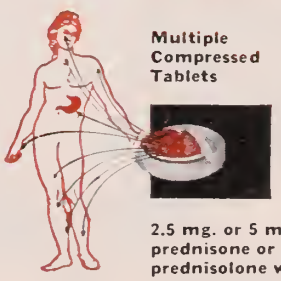


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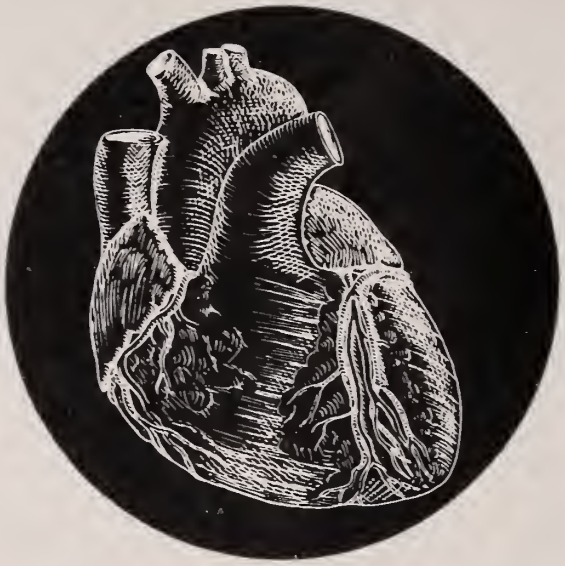
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The Virginia MEDICAL MONTHLY

March, 1957

Vol. 84, No. 3
Whole No. 1257

Guest Editorial....

The Non-Medical Education of the Doctor

A FEW DAYS ago your guest editor received a communication from an old friend who is now President of the American College of Surgeons. A reprint of a recent article from one of our leading medical journals was enclosed. The opening line of an operative note in the article had been marked and commented upon. The line read as follows: "Having been premedicated with atropine and morphine . . ." The comment read as follows: "Shades of William Osler!" Some of you have already guessed it. Your guest editor's correspondent was none other than the inimitable Dan Elkin, who in his Presidential address before the American Surgical Association in 1952 made an eloquent plea for the study of the humanities in the making of a doctor. Others have made similar pleas. Maybe we are just voices crying in the wilderness. It is discouraging to think that one of the authors of the article referred to above has gotten far enough along to be a member of both the American Surgical Association and the Southern Surgical Association. If he and his co-authors were guilty of such execrable English, one would think that the editor of the rather important journal in which the article was published would have corrected it.

The case just cited though is not unusual these days. One frequently hears leaders in our profession mispronouncing medical terms which are their everyday "stock in trade", expressing themselves poorly, and showing every time they speak that they are utterably unable to make clear statements. Lucidity of thought and expression, precision and accuracy in the use of the English language, which we once took for granted, are definitely on the decline.

Much of the present day medical literature is in marked contrast with the fine diction which was habitual in the professors of our better medical schools of 40 or 50 years ago. Those professors were thoroughly familiar with the humanities and their lectures were often enriched by classical allusions. If Brünnehilde were mentioned in a medical lecture today, the students would probably think that some new brand of German beer was being referred to.

Another correspondent, Dr. William E. Ladd, of Boston, recently wrote: "If one contrasts for example at Hopkins the characters of Osler, Halsted, and Welch with their successors, or at Harvard, Shattock, Richardson, or Fitz, or at Columbia P & S, Allen Whipple with their successors, one shudders and can hardly look at the contrast without a feeling that we have lost something important".

How does one account for the decline in culture among medical men? Possibly

one reason is that the competition for places in medical schools has become so keen that it tends to make students in college put all their time on subjects allied to medicine, thus sacrificing the humanities. Medicine has become vastly complex and the very complexities of it are so absorbing, that, unless doctors have, early in life, developed an interest in cultural subjects, those subjects are very apt to be neglected in the busy hurly-burly of medical practice.

The term "pre-medical" is almost a newcomer. For a long time there have been students in college who expected to study medicine, but not until recent decades have they considered themselves especially as pre-medical students. They were students getting the background of general education, which everyone considered to be essential for a professional man of any sort. The term "pre-medical" is a bad one because it connotes preparation for a technical field, whereas the ideal is for every man who expects to study medicine to be an educated gentleman before he even considers aspiring to the dignity of being a disciple of Aesculapius.

One cannot neglect the fact that our general educational system has deteriorated in the last forty years. Our public school system has succumbed to so-called Progressive Education, which is simply an alias for Hocus-Pocus. This has resulted in a multiplication of courses, both in secondary schools and colleges, a great many of which are snap elective courses, whereas in the old days the courses were almost exclusively "solid meat" courses into which one could sink one's teeth and derive intellectual sustenance. There is no royal road to learning and anyone who wants to get a *real* education has got to burn the midnight oil and spend hours and days, running into months and years, communing with the great of the past. Thus is culture obtained. One cannot simply brush up against a cultured man and obtain it in that way. It is more than skin deep and does not rub off easily.

Happily some of our medical schools are now becoming concerned about the deplorable lack of a knowledge of the humanities among many of their medical students. Various methods have been suggested for correcting this defect. It could be very simply corrected. In the first place, the medical schools could easily specify that a certain number of courses in the humanities were prerequisite for entrance to medical school, just as they now specify a certain number of science courses as entrance prerequisites. In the second place, they could accept students only from those colleges which have demonstrated that they turn out men of a broad general education.

How are those young doctors who have had the proper preliminary education to find time to keep up their reading throughout life? They will be busy with their practice, with medical meetings, hospital staff meetings, committee meetings, with keeping up with the medical literature, and with writing medical papers (we hope). Their days and nights will be full. However, they should make the old masters their friends. Much non-medical reading can be done by utilizing scraps of time. Books should be kept on the bedside table. A little reading can be accomplished before one falls to sleep. A few hours can usually be snatched over week ends. Vacations offer additional time. By utilizing these scraps of time, it is amazing how much can be done in a year. The reward will be entirely out of proportion to the effort—a knowledge of history and the humanities will give "a pleasure not to be repented of", and, in the words of Virgil "Haec olim meminisse juvabit" (These things will be pleasant to remember hereafter).

Amos R. Koontz, M.D.

1014 St. Paul Street
Baltimore, Maryland

Editor's Note: Dr. Koontz is assistant professor of surgery at Johns Hopkins Medical School and Hospital.

The Pigmented Mole and the Malignant Melanoma

GEORGE T. PACK, M.D.
New York, New York

PREFATORY TRIBUTE: It is a signal honor and a cherished responsibility to deliver the J. Shelton Horsley lecture. The man and the surgeon, in one, has left an indelible impression on four successive generations. *First,* as a student and novitiate in medicine his unusual merits were recognized by his elders, witness his scholastic honors, a Phi Beta Kappa membership, an assistantship in New York to the great John Wyeth. *Second,* as a practitioner of the healing arts, he was one of America's great general surgeons, indeed if not the last, whose versatile genius enabled him to operate with dexterity, to study with acumen and to make lasting contributions in such divers branches as gastrointestinal, vascular, plastic, orthopedic, urologic, neurologic, and gynecologic surgery, and to excel in all. His preeminence was acknowledged by his contemporaries, by honorary membership in international societies, by the conferral of honorary degrees from centers of learning, by election to presidencies of numerous local and national medical organizations. *Third,* as a teacher and humanist, in which his influence was directly communicated to those fortunate young men who enjoyed his tutelage as Professor of Surgery and the interns and resident surgeons whose training was directed by him during his 34 years' incumbency as Surgeon to St. Elizabeth's Hospital in Richmond. His influence, moreover, was indirectly but no less importantly felt by innumerable young surgeons on the national level; I remember best of all the kindly human interest, the encouraging praise and the generous friendship he so unstintingly gave to young surgeons such as myself. *Fourth,* as a surgical innovator of new technical methods, as a surgical philosopher, as an author of numerous books and more than 250 scientific publications, his thoughts and contributions will profoundly influence medical generations yet to come. I remember him anew and frequently because with each new aspect of cancer with which I become intrigued a research into the literature finds the name of Horsley identified with the evolution of knowledge on this subject.

INTRODUCTION: I have in my library a volume of "Miscellanies in Prose and Verse" written by Richardson Pack of Oxford, England and published by E. Curll of London, in 1725. Major Pack was a decidedly minor poet, but in one of his odes to "Dear Molly Spring", he begins his verse entitled "Cupid Not Blind":

"Not far from the Hide* lives a Damsel, so Fair,
I'd Give Her my Heart for one Lock of her Hair.
Her Cheeks are like Roses that Blush in their Prime;
Her Lips sweet as Cherries just Gathered in Time.
To Gaze on her Eyes might an Hermit inflame;
And Who Looks on her Moles but thinks o'That same?
Her Waist is as Taper as Mercury's Rod
And the Treasures below were a Prize for a God."

Whereas Richardson Pack was inflamed, as were his contemporaries, by the beauty of a lady's mole, the present author—some 230 prosaic years later—is romantically unmoved by any of them. They have given him nothing but trouble.

The ubiquitous mole and the iniquitous melanoma present a strange paradox in the history of neoplastic diseases, because the former tumor is almost universally present and the most common of all neoplasms, whereas the latter tumor is rare and the most malignant of all accessory cancers. Inasmuch as the vast majority of malignant melanomas originate from preexisting moles, the prevention of this cancer could be accomplished more frequently than for any other malignant neoplasm. There is no more rewarding prophylaxis against cancer than its prevention through excisions of moles considered dangerous.

HISTOGENESIS OF MOLES AND MELANOMAS

Considerable controversy exists concerning the

The J. Shelton Horsley Lecture delivered at the Richmond Academy of Medicine, April 13, 1954. This paper has been brought up to date since it was presented.

* A celebrated wood in Suffolk.

origin of the neval cell and its malignant derivative, the melanoma cell. In the early history of the study of this tumor it was at various times considered to be endothelial, mesodermal or ectodermal. Pierre Masson established the concept that neval and melanoma cells are common derivatives of the peripheral nervous system and are neuro-ectodermal in origin, having a relationship perhaps to the complex tactile end-organ apparatus. Pigmented moles and malignant melanomas may occur both in the corium and intra-epidermally, but even in the former instance one usually can trace a continuity of tumor growth in the primary lesion to the stratum germinativum. Those melanomas which are located superficially and are largely more intra-epidermal are classified as superficial melanomas; their prognosis is comparably much better than for the type which shows invasion of the corium. Both benign nevi and malignant melanomas occasionally differentiate to form abortive, bizarre types of end-organ apparati such as a peculiar corpuscular arrangement of cells simulating the Meissnerian corpuscles.

Arthur C. Allen has demonstrated the common origin of malignant melanomas from the junctional type of nevus and the tumor can be traced in continunity from the basal and adjacent layers of epidermis. The blue nevus of Jadassohn-Tieche is a truly mesodermal structure, composed of melanoblasts which seldom undergo malignant degeneration. They are bluish, black, elevated, superficially translucent in nature and present a clinical picture simulating malignant melanoma.

REGIONAL DISTRIBUTION OF PIGMENTED MOLES AND MALIGNANT MELANOMAS

Utilizing a group of 1,000 adult, white males and females who came to a diagnostic clinic for problems other than their moles, a survey was made of the frequency and regional distribution of nevi in this group and a composite scattergram was prepared. This study, made by Lenson and Pack, showed that the average American in this category had 15 such moles; they were relatively infrequent on the feet and on the genitals. Pack and Gerber prepared a similar scattergram showing the regional distribution of malignant melanomas in 1,225 patients in which case it was demonstrated that the malignant melanoma was very frequent on the soles of the feet and quite commonly located on the genitals in contradistinction to the distribution of pigmented moles. The obvious conclusion which could be reached from this comparative analysis was the greater hazard of moles occurring on the feet and genitals. It therefore was considered proper to advise the routine removal of all pigmented moles occurring in these particular locations.

Table I

Incidence of Melanoma According to Location

Location	Number	Per Cent
Total Cases	1,190	100.0
Head and Neck	263	22.1
Eye	56	4.7
Oronasal, Esophagus	21	1.8
Arm	101	8.5
Palm	16	1.3
Subungual	35	2.9
Leg	218	18.3
Sole	107	9.0
Trunk	288	24.2
Genitalia	37	3.1
Anorectal	19	1.6
Primary Site Unknown	29	2.4

The incidence of malignant melanomas according to location is such that 22 per cent occur in the skin of the head and neck, 24 per cent on the trunk, 18 per cent on the legs and 9 per cent on the soles.

INFLUENCE OF RACE AND COMPLEXION

Pigmented moles and malignant melanomas are not commonly encountered in the darker races, such as the Negro and Mongol. Among 1,225 patients with malignant melanoma there were only 17 Negroes, which is disproportionately few in view of the large Negro population in New York City. When melanoma does occur in the Negro, it is found with greater frequency on the soles of the feet, in the nail bed, and even in the oral mucosa, regions which commonly are not pigmented. The majority of malig-

Table II

Five-Year End-Results in the Treatment of Melanoma According to Location

Location	Total Cases	Determinate Cases	5 Years Without Recurrence	
			Number	Per Cent
Total Cases	744	575	123	21.4
Head and Neck	173	128	23	18.0
Eye	47	35	9	25.7
Oronasal	17	11	1	9.1
Arm	58	46	8	17.4
Palm	11	8	7	87.5
Subungual	24	18	7	38.9
Leg	125	98	30	30.6
Sole	59	48	15	31.2
Trunk	162	131	18	13.7
Genitalia	31	25	4	16.0
Anorectal	16	10	0	0.0
Primary Site Unknown	21	17	1	5.9

nant melanomas occur in patients who are either extremely blonde, with fair skin of delicate texture and few melanoblasts so that they burn rather than tan on exposure to sunlight, and with eyes that are blue or hazel. The second group in which melanoma occurs with some frequency consists of those individuals who are redheaded or of sandy complexion, and freckle on exposure to sunlight. It is estimated that only about 11 per cent of the American white population are of this coloration, yet more than 80 per cent of patients with malignant melanoma have this type of skin. It follows, therefore, as a natural corollary that it would be extremely important to remove all darkly pigmented moles, especially of the junctional type, as a prophylactic measure for blondes of this coloration.

Without dwelling on the details of this investigation, it may be stated that a study of the type and distribution of pigmented moles among the various races such as Chinese, Filipinos, Indians (India), Mestizos, Maoris, and pure blood American Indians of the Guarani tribe from the Chaco in Paraguay shows a paucity of moles in these dark-skinned peoples, but with very great frequency in the Mestizos of mixed White and Indian blood. The majority of Negro patients with malignant melanoma are largely caucasoid in their appearance. Myron Gordon has shown an experimental corollary to this clinical observation by mating the Albino Swordtail fish with a closely related species, the Spotted Platy which has micromelanophores. In the second generation macromelanophores appeared, and in the third generation—according to the Mendelian ratio —true malignant melanomas developed.

THE MANAGEMENT OF PIGMENTED MOLES

The removal of all moles of suspicious or dangerous character should be done in infancy or childhood, before the possibility of malignant transformation can occur. In some instances the melanoma appears to develop from otherwise intact skin and would, therefore, be melanoma de novo, and yet we cannot state with certainty that neval cells do not pre-exist as they may not have been in a cluster sufficiently large or with sufficient pigmentation to be obvious to our vision. Under such circumstances it is conceivable, although one cannot prove that a nevus of microscopic size may have been present. The transformation of a mole to a malignant melanoma may occur without clinical evidence, and metastases may occur to regional lymph nodes from an adjacent pigmented skin tumor that has all the appearance of benignity. On the other hand in the case of a long-existent pigmented mole that has not changed its character and then suddenly becomes elevated or increasingly pigmented or ulcerated, or bleeds and is attended by localized discomfort or pain, one may assume until proven otherwise that a malignant melanoma is in the process of formation.

It has not been proved that trauma by clothing or injuries can convert a benign nevus into a malignant melanoma. The nevus is a fairly firm structure, whereas the melanoma is soft, disorganized, vascular and readily torn with slight pressure or irritation. Hence, the probability exists that the reputed trauma which the patient believes is responsible for the development of the melanoma was injury which occurred after the melanomatous change had developed in the nevus. All nevi which are of a type that is suspicious or showing change should be surgically excised with considerable margin and the specimen always referred to a competent tumor pathologist for microscopical study. It has not been an unusual experience to see patients whose moles were pronounced benign by pathologists only to have metastatic melanoma appear in regional lymph nodes at a later date. This tragic occurrence necessitates a review of the original microscopical sections and a change in the diagnosis. A routine microscopic study of every pigmented mole that is excised should be done. The excision in all instances may be conservative, but if malignant melanoma is found then hospital admission with radical surgical treatment is imperative.

Huge congenital nevi that cover a large expanse of skin should be excised in childhood before the pre-pubertal period. This may be done either by repeated segmental excisions, removing the central

Table III

Five-Year End-Results in the Treatment of Melanoma According to Sex and Age

	Total Cases	Determinate Cases	5 Years Without Recurrence	
			Number	Per Cent
Sex:				
Male	372	294	46	15.6
Female	372	281	77	27.4
Age:				
Pubertal*	86	71	16	22.5
Adult†	641	495	105	21.2

*Ages 11 through 30 years.
†31 years and over.

portion of the tumor as widely as possible each time and allowing for the elasticity of the skin to permit another wide central excision at a later date until only a linear scar is left, or if feasible to apply a skin graft.

TABLE IV

FIVE-YEAR END-RESULTS IN THE TREATMENT OF MELANOMA ACCORDING TO DELAY IN DEFINITIVE SURGERY

Type of Case	Determinate Cases	Per Cent of Determinate Cases	5 Years Without Recurrence	
			Number	Per Cent
Operable—Total	415	73.3	117	28.2
Immediate*	203	35.9	81	39.9
Delayed†	212	37.4	36	17.0
Inoperable	151	26.7	0	0.0

*No previous treatment or local excision within one month of definitive surgery.

†Local excision more than one month prior to definitive surgery.

MULTIPLE PRIMARY MELANOMAS

Multiply primary foci of malignant melanoma may develop in the same patient. The reasons why this phenomenon has not been generally recognized have been: first, that malignant melanoma is an infrequent cancer, so that in the experience of any one surgeon or dermatologist few instances of multicentric melanomas have been encountered; second, the frequency with which multicentricity of origin occurs in this tumor must be rare as it has been present in less than 2 per cent of our patients; third, the cure rate for malignant melanoma is so low that perhaps some patients who might in the course of time develop a new and independent melanoma have died of the initial melanoma before such multicentricity is evident; fourth and finally, both the clinician and the pathologist may erroneously interpret a new black tumor in the skin as a cutaneous metastasis from a previously treated melanoma rather than an independent new tumor.

As the curability of malignant melanoma increases one might reasonably anticipate that further instances of multicentricity may be recognized.

In some patients the appearance of disparate foci may occur concurrently, but in other patients the appearance of such tumors may be over many years. One reason, perhaps, why the frequency of multiple melanomas has not attracted attention is because the patient who has had one melanoma reports early for the prophylatic removal of any suspicious nevus that might alarm him. It also follows that patients will have a better opportunity for cure of a second melanoma than of the first because of their earlier recognition of the importance of the tumor and pari passu the institution of earlier and appropriate treatment.

The ultimate decision as to whether a pigmented lesion in the skin is a cutaneous metastasis from the previously excised melanoma or an independent true tumor rests with careful microscopical scrutiny. As Arthur C. Allen has shown, this distinction can be determined unequivocally by the presence or absence of a junctional change in the epidermis or epithelium overlying the lesion. If the black tumor is an independent primary melanoma its origin can be traced in continuity to the stratum germinativum, but if it is a metastatic focus it disrupts the epidermis.

PRE-PUBERTAL MELANOMA OF SKIN

Perhaps all pigmented nevi are congenital, but many of these moles are not visible until the period of approaching puberty. Some dermatologists have erroneously classified moles into congenital and acquired. The appearance of a nevus at a certain date in the growth of the individual does not necessarily mean that the tumor did not pre-exist in an invisible and minute stage. With the hormonal changes attendant on the state of approaching puberty many moles make their appearance. At such a time they become larger, more readily visible with increased pigmentation and a tendency to become elevated above the level of the surrounding skin.

There is one important type of pigmented nevus which bears such a close resemblance to malignant melanoma that it is not always possible clinically to distinguish between the two. These melanotic tumors are found in children up to the age of puberty and occasionally in young adults. They are commonly rather darkly pigmented, bluish, blue black or dark brown in color, smooth and well demarcated. This tumor, the so-called pre-pubertal melanoma, has been divided by Arthur C. Allen into two categories, one which may contain numerous giant cells and in its evolutionary pattern becomes invasive or metastasizes, and the other which resembles the histological pattern of the melanoma in the adult which in rare instances does metastasize. As a general rule melanomas of infancy and childhood do not disseminate and therefore can be treated in a more conservative fashion seldom requiring skin grafting. There are sufficient numbers of exceptions to this rule as testified by the occasional case which falls in one's experience and the publication of

individual case reports intended to refute the dictum that pre-pubertal melanomas never metastasize, as to warn the clinician not to be too nonchalant about the management of such tumors. This relationship to the age of the patient is so well recognized that most pathologists insist on having clinical information available concerning the age of the individual and whether evidences of approaching puberty are found such as enlargement of the female breasts or the growth of axillary and pubic hair.

The proper lesson to be learned from these observations is the wisdom of complete surgical removal of all dark deeply pigmented nevi in childhood and the mistake that is commonly made in delaying the operation until some evident change has occurred in these tumors with approaching puberty because at that time the malignant transformation already may have occurred.

THE DEVELOPMENT OF MALIGNANT MELANOMA DURING PREGNANCY

Although obstetricians have been cognizant of the pigmentary changes which occur in the nipples, abdomen and face of pregnant women, there has been little commment upon the common tendency of existing moles to become much darker during pregnancy. The transformation of benign nevi to malignant melanomas, the rapidity of their growth, their early dissemination and low rate of curability during pregnancy has not been known generally. Some years ago we made a report of 32 patients whose pregnancy was associated in some way with the growth of malignant melanoma. It is difficult to determine the exact incidence of malignant melanomas developing during pregnancy. Statistical data furnished by Doctor S. A. Cosgrove of the Margaret Hague Maternity Hospital in Jersey City, New Jersey, found 3 instances in 122,000 pregnancies. Our own studies were divided into 3 groups in which the first include those pregnant women with co-existent active malignant melanoma. The second group consisted of patients in the post partum stage, with malignant melanoma, who had recognized changes occurring in pre-existing nevi during their pregnancy, and a third, less important group, were those patients who previously had had malignant melanoma and subsequently became pregnant. The disease commonly is fatal when it develops during pregnancy, but a number of patients who have been treated surgically for malignant melanoma and subsequently became pregnant have experienced long term cures. In contradistinction to the regional distribution of melanomas experienced in a series as a whole, those which developed during pregnancy were preponderantly on the trunk. In conclusion, it may be stated that the prognosis for malignant melanoma occurring in young pregnant women is much worse than obtains for the disease occurring at other times of life, or in the male.

THE PLACENTAL TRANSMISSION OF MELANOMA FROM MOTHER TO INFANT

Based on the infrequency of case reports, the transmission of malignant melanoma in a pregnant mother to her infant in utero is a rare incident. Although infants with pre-pubertal melanomas seem to possess a humoral resistance to its invasion and spread, the child in utero has no resistance to the growth and dissemination of a homologous graft of melanoma cells from the mother transmitted through the placenta. A bona fide case of such placental transmission has been reported from the Memorial Cancer Center by Dargeon. The metastatic melanoma involved the placenta, invaded the chorionic villi and had blood-borne metastases developing by way of the umbilical vein to the liver and thence generalization of the disease.

VISCERAL METASTASES FROM MELANOMA

Postmortem examinations on patients dying of malignant melanoma in the Memorial Cancer Center reveal the remarkable fact that metastases to bone occur in 49 per cent of patients; to the heart in 44 per cent, and to the brain in 38 per cent. We are so cognizant of this occurrence that in patients with melanomas which have metastasized even to regional lymph nodes electrocardiographic studies and often electro-encephalograms are made, even in the absence of symptoms. With proper corrections for the relative incidence of the various major varieties of cancer the malignant melanoma metastasizes to brain more commonly than any other tumor, exceeding even cancer of the breast and bronchogenic carcinoma. Melanomas metastasize with some frequency to the mucosa of the gastrointestinal tract, and in some instances produce polypoid tumors which intussuscept and require surgical resection of the small intestine. Such postmortem examinations reveal the fact that the malignant melanoma often metastasizes by the blood vascular route, with widespread visceral dissemination; these patients inevitably are lost, and account for the high percentage of failures which attend even the most radical surgical treatment. It is evident, also, from these studies that the malignant melanoma possesses the

ability to grow in whatever tissue it lodges, and that it does not possess the differential selectivity for metastatic deposits that so commonly characterizes other varieties of cancer. Occasionally the first evidence of visceral dissemination is an almost imperceptible, slight grayish pallor of the skin experienced in many patients with malignant melanoma. The early recognition of this phenomenon is a matter of experience. In some patients the coloration of the skin proceeds to the point of actual blueness, or melanosis, of a degree as intense as that seen in Argyria.

ANO-RECTAL MELANOMA

Considering the many thousands of proctoscopies which are performed each year, it is surprising that pigmented nevi seldom are encountered or recognized within the anal canal. The malignant melanoma of the ano-rectal canal is a rare tumor comprising only approximately 1.25 per cent of all cancers of this region. The discovery of a bluish-black polypoid localized lesion, associated with bleeding on defecation may lead to a temporary error in diagnosis, being mistaken for hemorrhoids.

The prognosis for ano-rectal melanomas is worse than for any other primary regional location of this tumor. The act of defecation constantly traumatizes these melanomas and may contribute to ulceration and infection with consequent early dissemination both by the lymphatic and blood vessel routes. The dissemination of the melanoma via the portal venous system to the liver is of such frequent occurrence as to militate against a high rate of curability even by the most radical local surgical attack.

Lymph-borne metastases from ano-rectal melanomas extend upward along the superior hemorrhoidal vessels to the same lymph nodes which drain the rectum proper, even as high as the origin of the inferior mesenteric artery. Metastases also spread laterally to be deposited in the iliac and obturator lymph nodes. Furthermore, by way of the peri-anal lymphatics metastases occur with some frequency into the medial superficial inguinal lymph nodes.

Malignant melanomas of the ano-rectal canal even of the most minute size require a radical abdomino-perineal rectal resection even more urgently than is indicated for the average adenocarcinoma of the rectum. In addition to the classical abdomino-perineal rectal resection, the operation should consist of a pelvic lymph node dissection and a bilateral dissection of the inguinal and femoral lymph nodes in continuity with the anus by removing a wide strip of skin and subcutaneous tissue with the fascia intervening between the groin and the perineum, the procedure being done in one continuous seance.

The curability of ano-rectal melanoma has been extremely low, perhaps because the initial step in treatment has not been of a radical character herewith described. It is our hope that the routine application of this radical procedure will afford greater opportunity for cure in the case of ano-rectal melanomas, providing the disease has not metastasized already by the blood vascular route.

MALIGNANT MELANOMA OF THE GENITALS

Malignant melanomas occur with much greater frequency on the vulva and outer vaginal third external to the hymeneal orifice than they do on the male genitals. If the melanoma should involve the cutaneous envelope of the body of the penis, together with the prepuce, metastases usually appear first within the superficial inguinal lymph nodes and the groin dissection in these instances may be of superficial character without extension above the inguinal ligaments. If metastases are evident even though demonstrable unilaterally, a bilateral dissection of the groins should routinely be done because the collecting lymphatic trunks at the root of the organ separate and diverge to the right and left sides. Whenever the glans penis is involved with the melanoma the problem is complicated greatly because the lymphatic drainage of this part of the organ may be not only into the superficial inguinal lymph nodes, but more deeply into the external iliac or hypogastric lymph nodes without intervening stops. Furthermore, one must consider the existence of a group of two or three prepubic lymph nodes which are situated in the midst of the presymphyseal lymphatic plexus which drains the lymphatics of the glans and in turn empties into the external iliac lymph nodes. Therefore, the proper surgical procedure for malignant melanomas of the glans penis, particularly when the external urethra is implicated, should be a radical penectomy with bilateral groin dissection and extension of the dissection to include the iliac and obturator lymph nodes.

Melanomas of the clitoris occur with some frequency and disseminate through the lymphatics in the same distribution as occurs with melanomas of the glans penis, i.e., they are prone to extend deeply into the iliac lymph nodes above the inguinal ligaments. The vulva is so abundantly supplied with a network of anastomosing lymphatics that metastases from any portion of the vulva may spread

bilaterally or contralaterally to the groins. Therefore, all melanomas of the vulva are suspected of bilateral inguinal metastases. Groin dissection associated with vulvectomy should be bilateral, always, and a radical vulvectomy done in one stage routinely includes bilateral groin dissection even in the absence of clinical evidence of metastases to these nodes. Whenever the melanoma extends upward along the vaginal mucosa, a radical vulvectomy should be accompanied by a vaginectomy, because of the frequency with which internal pelvic lymph node metastases are found. Melanomas involving the outer vaginal third, that is to say the portion of the vagina external to the hymeneal orifice, which embryologically is identical in its lymphatic drainage with the external vulva, may be treated by the orthodox method of radical vulvectomy with bilateral groin dissection.

SUBUNGUAL MELANOMA

A frequent location of melanoma is in the nail bed, where it is known as subungual melanoma—or by the term melanotic whitlow, as described by Jonathan Hutchinson. The malignant melanoma more frequently is seen in this location than is its benign precursor the pigmented nevus, although the latter does occur. Subungual melanomas frequently are confused with subungual hematomas, with chronic paronychial infections and with subungual hyperkeratoses. Many of the subungual melanomas are non-pigmented and because of this, the majority of patients have had partial or complete removal of the nail bed with such traumatic procedures as curettage and partial excision before the true nature of the disease is recognized and a biopsy studied microscopically. The average patient has had two minor operations of this character before the true nature of the subungual melanoma was established. The suffusion of the melanotic pigment may extend far beyond the nail bed, and this characteristic halo of pigment at the tip of the finger and along the lateral aspects of the nail surface often is pathognomonic in the establishment of a correct diagnosis.

The cure rate for subungual melanoma in spite of previous surgical trauma is higher than for melanomas of many other locations, probably due to the willingness of the average patient to give consent for the sacrifice of a digit by amputation, which he will not so readily do for melanomas involving a major extremity.

THE SURGICAL TREATMENT OF MALIGNANT MELANOMA

Although the majority of malignant melanomas can be identified by inspection, some are so early in their manifestations and so closely simulate a heavily pigmented junctional nevus that microscopic verification is necessary. Under these circumstances, one does not excise a portion of the lesion for study but performs an excisional biopsy by removing the suspected pigmented tumor into its entirety, using a liberal but not extravagant margin and effecting primary wound closure.

Once the diagnosis of malignant melanoma is made then a very wide sacrifice of surrounding skin, subcutaneous fat and fascia should be done. The same principle obtains here as Halsted advised for cancer of the breast, namely—to remove a sufficiency of skin and not primarily to be concerned about the ease of skin approximation. The incision should go so deep as to constitute a three dimensional dissection, because not only should it extend far beyond the limits of the tumor as to surface dimension but to remove the fascia overlying the muscles in order to extirpate the adjoining lymphatics in the neighborhood of the melanoma. The removal, of the skin in the majority of locations, for example on the lower extremities, is so great as to necessitate the immediate application of a skin graft in the majority of cases. On the face the excision should still be three dimensional and the defect closed by transposed flaps in order to give the best possible cosmetic restoration. On the trunk huge defects can be closed sometimes by lateral sliding flaps and by large Z-plasties, but if they are impractical then free skin transplants may be required.

Whenever the melanoma is closely adjacent to regional lymph nodes and the operation of excision and dissection in continuity, or monobloc dissection, is planned, the extent of the incision is such that primary wound closure can almost always be effected. The prognosis, of course, is best when the melanoma is widely excised before metastasis has occurred. It is not always possible to detect metastasis in the early stage of melanoma, and to know whether the metastases have disseminated through the lymphatic or blood vascular routes. Melanomas which seem to disseminate by way of the regional lymphatics often are amenable to radical surgical treatment, but those melanomas which spread through the venous channels ultimately develop visceral metastases and hence are incurable from the time this accident happens.

EXCISION AND DISSECTION IN CONTINUITY FOR PRIMARY AND METASTATIC MELANOMA

When a malignant melanoma is so situated in the skin as to be closely adjacent to the first relay of lymph nodes, and to which one reasonably might expect metastases to occur, the principle of monobloc excision and dissection in continuity may be practiced. This principle includes the removal of an elliptical segment of skin including the primary melanoma, the intervening skin between the site of the melanoma and the axilla or groin or neck, and a dissection of the lymph node bearing region together with a wide excision of the underlying fat and fascia down to and exposing the muscles over this region. The operation always is completed by a thorough dissection of the regional lymph nodes that may be implicated by metastasizing melanoma. As a rule, the dissection of fat and fascia is much wider than the sacrifice of skin. This principle, which first was advocated by Halsted for the treatment of breast cancer, finds suitable application for all malignant melanomas metastasizing by the lymphatic system, but it requires an ingenious planning of incisions to encompass the primary melanoma and the regional lymph nodes, this being due to the infinite number of locations in which the malignant melanoma may occur. By this means not only the primary tumor and the first relay of metastases in regional lymph nodes are removed, but the intervening lymphatics as well. Theoretically this measure should restrain the great tendency for metastases to develop in the intervening tissues between the primary site and regional lymph nodes. The adoption of this principle in the treatment of malignant melanomas has perceptibly improved the end results.

INDICATIONS FOR AMPUTATION OF EXTREMITIES

Sometimes the condition exists wherein the primary malignant melanoma is situated in the skin at a remote site from the regional lymph nodes involved by metastasis; for example, in melanoma on the sole of the foot with metastases to the femoral and inguinal lymph nodes, or a melanoma occurring in the nail matrix of a finger with metastases in axillary lymph nodes. With such an enormous intervening distance between the primary melanoma and the metastases in regional lymph nodes it is not possible by any technical operative procedure to remove both the primary and the metastatic foci with the dissection of all the intervening lymphatics between the two sites. It is our opinion that it is hazardous to permit any of the intervening lymphatics to remain because with the dissemination of malignant melanoma by way of the myriad of lymphatic vessels and their sluggish circulation, the accidental lodgment of the melanoma cells anywhere en route inevitably would lead to local recurrence in the arm or leg. This complication has occurred so frequently in patients having an amputation of a toe with groin dissection, for example, with metastases occurring subsequently in the skin and subcutaneous tissues of the intervening leg, that it was realized that a more radical operation must be planned.

Although the patient and his physician might consent immediately to such a radical operation as hip joint disarticulation for a bone sarcoma of the femur, it has been difficult to secure consent for this operation in the case of a small melanoma on the ankle with metastases to femoral lymph nodes, and yet the disease is as fatal as other types of cancer that have more frightening aspects. Except under most unusual circumstances it probably is safer for the patient who has a melanoma of the hands or feet with metastases to the axilla or groin, respectively, to submit to an amputation of the entire extremity plus dissection of the regional lymph nodes. Only by such measures can all of the intervening lymphatic network be removed and with it the danger of deposition of melanoma cells and local recurrence in the intervening tissues. In other words, in the lower extremities and in the majority of cases the patient probably should undergo a hip joint disarticulation with dissection of the deep lymph nodes in the groin. In the upper extremity with a similar situation of malignant melanoma of the hand, metastatic to axillary lymph nodes, the preferable treatment would be an interscapulo-thoracic amputation—this is a removal of the scapula, the clavicle and the entire upper extremity, associated with dissection of the lower cervical lymph nodes. In such an operation the axilla is removed rather than dissected, and the surgeon has greater assurance of carrying the dissection superior to the upper limits of dissemination of the melanoma.

It is admitted that there have been a few cases in our experience in which the discontinuous operation of amputation of a digit and independent axillary or groin dissection has resulted in five-year definitive cures. Neverthless, the number of these patients is so few in comparison with the large group of failures that one is reluctant to advise such conservative procedures except in aged subjects.

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Treatment for "MS" Found Useless

Previous indications that a vitamin-B-like synthetic drug might help multiple sclerosis patients were unfounded, further research has shown. Two groups of researchers say that isoniazid, used successfully against tuberculosis, has little effect on the course of multiple sclerosis over long periods.

MS, as it is sometimes called, is a disease of unknown cause which attacks the nervous system, resulting in weakness, incoordination, jerking of limbs and other symptoms. No cure is known. Two reports on attempts to treat MS by isoniazid appeared in the January 19 Journal of the American Medical Association.

Two years ago, Drs. John T. Kurtzke and Louis Berlin, White Plains, N.Y., reported striking improvement in hospitalized patients given isoniazid for less than three months. Since then they have conducted tests on more patients for longer periods. They reported that isoniazid resulted in about the same improvement as would be expected without any treatment. Patients still receiving isoniazid after discharge from the hospital had periods of worsening at about the same rate as those not getting it.

Another article in the issue reported a study in 11 Veterans Administration hospitals in which 186 patients with MS were studied for at least nine months. This study, stimulated by the original report of Drs. Kurtzke and Berlin, also showed that the drug had no effect on MS.

The VA researchers were headed by Dr. Benedict Nagler of the VA central office, Washington, D.C.

Temporal Bone Surgery

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A SURVEY of the the temporal bone surgery, performed at the University of Virginia Hospital during the past ten-year period, was conducted for several reasons.

First, observations made by Davison[1], Cawthorne[2], and Goodale[3] stimulated our interest in this subject. In Davison's hospital (Danville, Pa.) one with an active otolaryngologic service, he noted that there had been no mastoidectomies required in any case treated initially by him for acute otitis media, in the past ten years; and in the period, 1945 to 1954, there had been only three deaths from complications of otitis media. Cawthorne (London) observed that the sharp decline in surgery for suppurative ear disease had been more than compensated for by the necessity of temporal bone operations for nonsuppurative ear conditions, such as those concerned with hearing (deafness), balance (Ménière's disease), and facial movements (facial nerve palsy). Goodale and Montgomery's essay dealt with some of the problems that still may arise from otitis media and the dangers inherent in the nonsurgical concept of acute suppurative otitis media.

Secondly, being aware of the demand for and lack of well-trained otolaryngologists, we were interested in the material now available for otological training.

As all who practiced medicine in the pre-antibiotic era know, there has been a pronounced decrease in the number, severity, and complications of suppurative infections in all parts of the body, due to the effectiveness of the many antibacterial drugs. As far as otology is concerned, this has resulted in a marked diminution in the number of surgical procedures required for temporal bone disease. However, as will be evident, this change is not by any means hundred per cent favorable, and one is still confronted with problems in the treatment of diseases of the ear, mastoid process, and other portions of the temporal bone. As these conditions require specialized knowledge, someone trained in the management of them should be available if the welfare of the patient is to be guarded.

For instance, we believe that, theoretically, if every case of acute suppurative otitis media were treated early and adequately with a suitable antibacterial drug, plus surgical drainage if middle ear fluid is present, then surgical and nonsurgical complications of otitis media would be practically nonexistent. We hasten to observe, for the benefit of some of our colleagues in other fields, that we do not intend to give the impression that we believe myringotomies necessary in all cases of otitis media within the first 24 to 48 hours of the infection. However, if response to treatment is not favorable and there is evidence of fluid in the middle ear, especially if it is purulent in character, then the patient will benefit by incision of the drum and the drainage gained therefrom.[4]

Returning to the survey, interesting data was obtained from examination of the records, some of which are of primary interest to the otolaryngologist, and our plans are to utilize this material for a future presentation. However, some information was acquired which, we think, is of general interest, and this will be presented with the aid of several charts.

During a ten-year period between July 1946 through June 1956, the records of 449 patients, who, for various reasons, had submitted to some type of temporal bone surgery, were studied. The operations were performed by all members of the Visiting and Resident Staffs of the Department of Otolaryngology. In approximately one-half of the cases, the Senior Resident was the operator, assisted by a visiting staff member and/or Junior Resident. In about two-thirds of the remaining cases, the Senior Resident served as first assistant.

No procedures of stapes mobilization (stapedolysis for correction of hearing deficiency—25 in number) were included in the group surveyed.

Five hundred and four surgical procedures were performed on the 449 patients (Table I). Thus,

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From the Department of Otolaryngology, University of Virginia Hospital, Charlottesville.

Table I

Surgery of the Temporal Bone

July 1946-June 1956

Total Number of Patients	449
Total Number of Operative Procedures	504

55 patients had bilateral ear operations or multiple procedures were performed upon the same ear. For example, some cases required bilateral mastoidectomies, and others revision of previous operations because of persistent otorrhea.

Table II

Year	Procedures/yr.	Patients/yr.
1946-1947	37	35
1947-1948	43	42
1948-1949	49	44
1949-1950	48	39
1950-1951	41	38
1951-1952	53	47
1952-1953	46	42
1953-1954	66	57
1954-1955	53	47
1955-1956	68	58
Total 10 yrs.	504	449

Mobilization of stapes not included in this survey (25 cases).

Table III

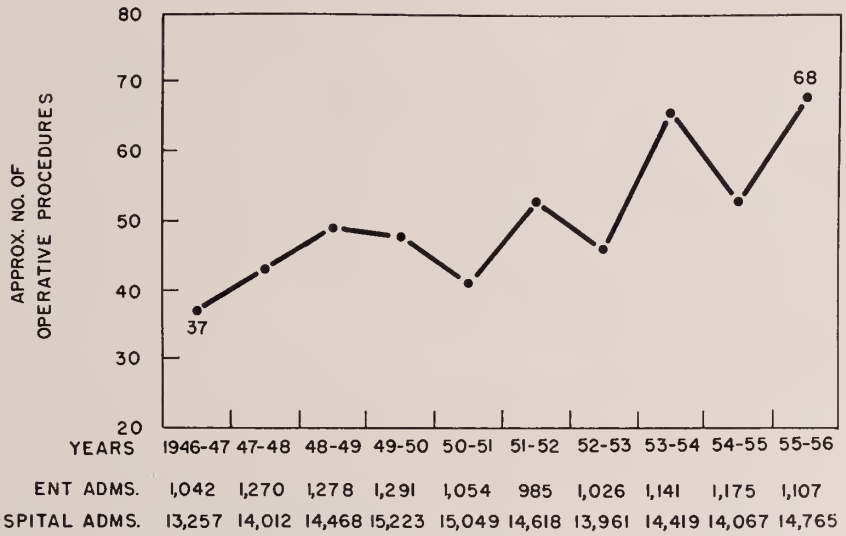
Type of Disease

Year	Infections: Acute	Infections: Chronic	Non-Infections: Otosclerosis	Non-Infections: Miscellaneous
1946-1947	4	27	3	3
1947-1948	2	34	6	1
1948-1949	4	39	5	1
1949-1950	4	31	13	0
1950-1951	5	29	5	2
1951-1952	1	39	12	1
1952-1953	3	28	14	1
1953-1954	4	38	24	0
1954-1955	5	23	22	3
1955-1956	5	48	8	7
Total 10 yrs.	37	336	112	19
Totals		373		131

Congenital Anomalies and Infection	3
Tuberculous Otitis and Mastoiditis	2

of cases transferred from other services after initial hospitalization.

Operations for infections, 373 in all, indicated a marked difference in number between those required for acute and those for chronic infection. In the pre-antibacterial era, this ratio was not nearly as apparent. We are under the impression that since the development of the antibacterial drugs, the decrease in acute mastoid and ear infections has been accompanied by a relative increase in chronic infections of the same areas.



Reference to Table II and the accompanying graph demonstrates a gradual increase in the number of operations since 1946, all of which are not accounted for by performance of the fenestration procedure for defective hearing. For instance, in the year 1956, the increase in the number of operations was due to a rise in the incidence of suppurative ear disease, and occurred in a period when there was a slight decrease in the number of patients admitted to the Otolaryngologic Service. Incidentally, the figure in Graph I represents only those patients admitted to the Otolaryngologic Service primarily, and does not include a significant number

In the group of surgical procedures, for noninfectious conditions, is the fenestration operation for the restoration of hearing (Table III). As one would anticipate in view of the recent good results with the stapes mobilization procedure, the fenetration operation will decrease in frequency, although it has been eminently successful in restoring hearing and will still be indicated in certain groups of

patients. The remaining operations studied in this category, 19 in number, have been listed in a miscellaneous group in Table IV. Time does not permit any elaboration here except to observe that congenital anomalies of the ear (1.3% of total) occurred more often than we had anticipated. Four intrinsic malignant neoplasms of the middle ear were encountered, only one of which has a six-year-plus survival period following surgery and irradiation. The procedures for seventh nerve palsies and spasm were decompression and neurolysis.

Ménière's disease requiring surgery is rare in our

TABLE IV

1. Neoplasms (Ear)	7
Malignant	
Epidermoid Carcinoma (Intrinsic)	3
Angioendothelioma	1
Benign	
Glomus Jugulare	2
Primary Cholesteatoma—Mastoid Process	1
2. Congenital Atresia—Ear Canal	*3
3. Traumatic Seventh Nerve Paralysis	2
4. Bell's Palsy	1
5. Meniere's Disease	1
6. Hemifacial Spasm	1
7. Exploration Normal Mastoid	1
	23

*Three additional anomalies of this type classified under infections—(Total 6).

experience. A total of 18 patients have been operated upon for this condition at the University of Virginia Hospital in the past ten years. Differential section of the eighth nerve, by the neurosurgeons, has been the procedure of choice. However, the simpler otological procedure, labryinthectomy, may be utilized at times in those patients who have no useful hearing in the offending ear.

Thirty-one (6.9%) of the cases had a complication of the ear and mastoid infection which necessitated urgent operation, meningitis being the most common (Table V). There were no deaths resulting from temporal bone surgery per se. Seven deaths occurred, one of which was listed as due to tuberculous leptomeningitis, an ear infection, and operation being noncontributive. Two cases expired of meningitis, and one of brain abscess, as the result of infections of otogenous origin. The remaining deaths were caused by malignant neoplasms. The over-all death rate of 1.6% seemed surprisingly low to us.

TABLE V

COMPLICATIONS OF EAR INFECTIONS DIAGNOSED UPON ADMISSION

Complications	No. Patients
Meningitis	9
Subperiosteal Abscess	7
Facial Paralysis	6
Brain Abscess	4
Lateral Sinus Thrombosis	2
Labyrinthitis	2
Petrositis	1
	31

SUMMARY

From this rather brief summary of a survey of 504 procedures performed upon 449 patients, we conclude that:

Adequate but not abuandant material for residency training is available. This must be supplemented by self-initiated study and work in the anatomical laboratories and in the morgue.

There is, possibly, an increasing number of cases of chronic suppurative ear disease requiring surgery.

The number of operations for non-infectious ear disorders, excepting those for deafness, was not as large as one would anticipate, and indicates conservatism in the surgical attack upon such conditions as Bell's palsy and Ménière's disease, in our hospital.

The finding of a low over-all death rate as the result of ear disease and no deaths as the consequence of aural surgery is an encouraging disclosure.

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Bacterial Meningitis in Infants and Children

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THERE HAVE been several excellent reviews of purulent meningitis in current pediatric literature.[1,2] They stimulated interest in studying meningitis as it was seen and treated in Virginia. One hundred fifty consecutive cases of bacterial meningitis admitted to the Pediatric Service of the Medical College of Virginia between January, 1953, and January, 1956, were reviewed. Cases of tuberculous origin were not included.

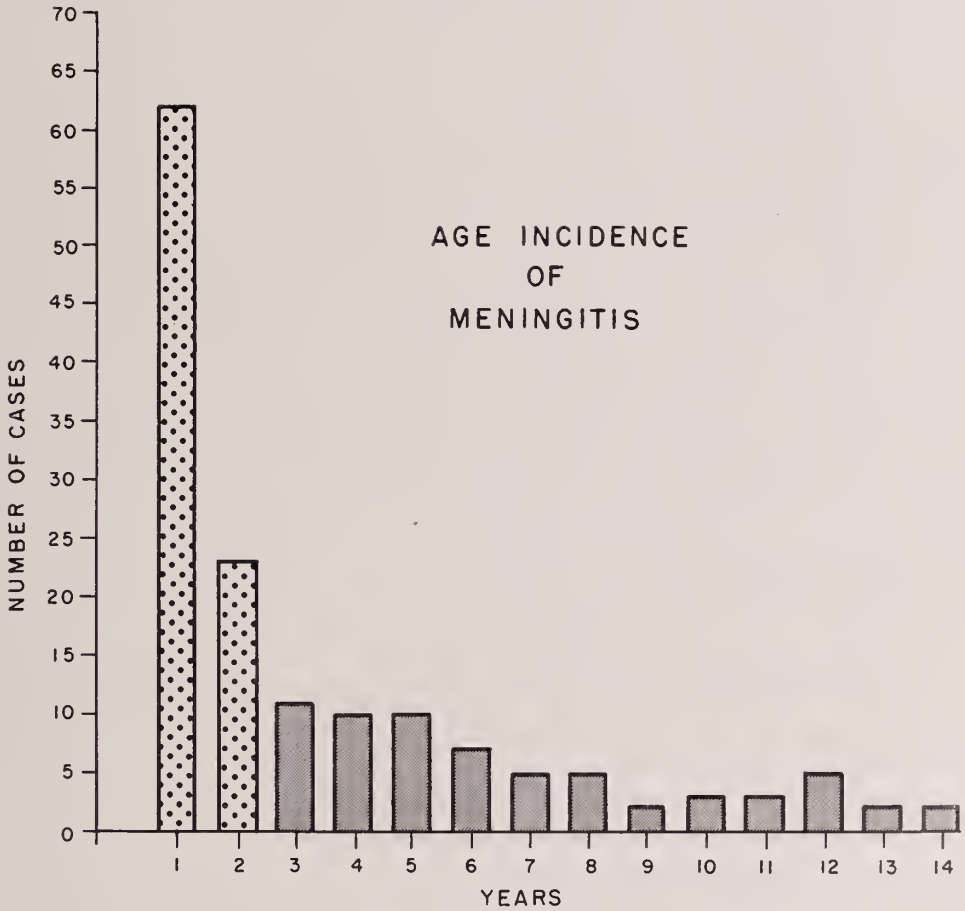


Fig. 1

AGE AND SEASONAL INCIDENCE

The greatest number of cases occurred within the first year of life. (Fig. 1) Of the sixty-two infants contracting meningitis before their first birthday, thirty were less than three months old. Thus we see that the largest proportion of the children become ill at an age when it is extremely difficult to make an early diagnosis. These figures only serve to confirm previously known facts.[3]

Bacterial meningitis is primarily a disease occurring in the winter and spring. This is at a time when respiratory illnesses are prevalent, and also at a time when the physician is overworked and tired. A practitioner must be on his toes to differentiate meningitis from a case of "flu" or "a virus that's running around". According to Smith and Herring[4], a peak rise in case number occurred in December. We had more cases in January than in December. (Fig. 2) An unexplained drop in admissions was noted in March in our series, while Smith had about an equal number in March and April as in January and February.

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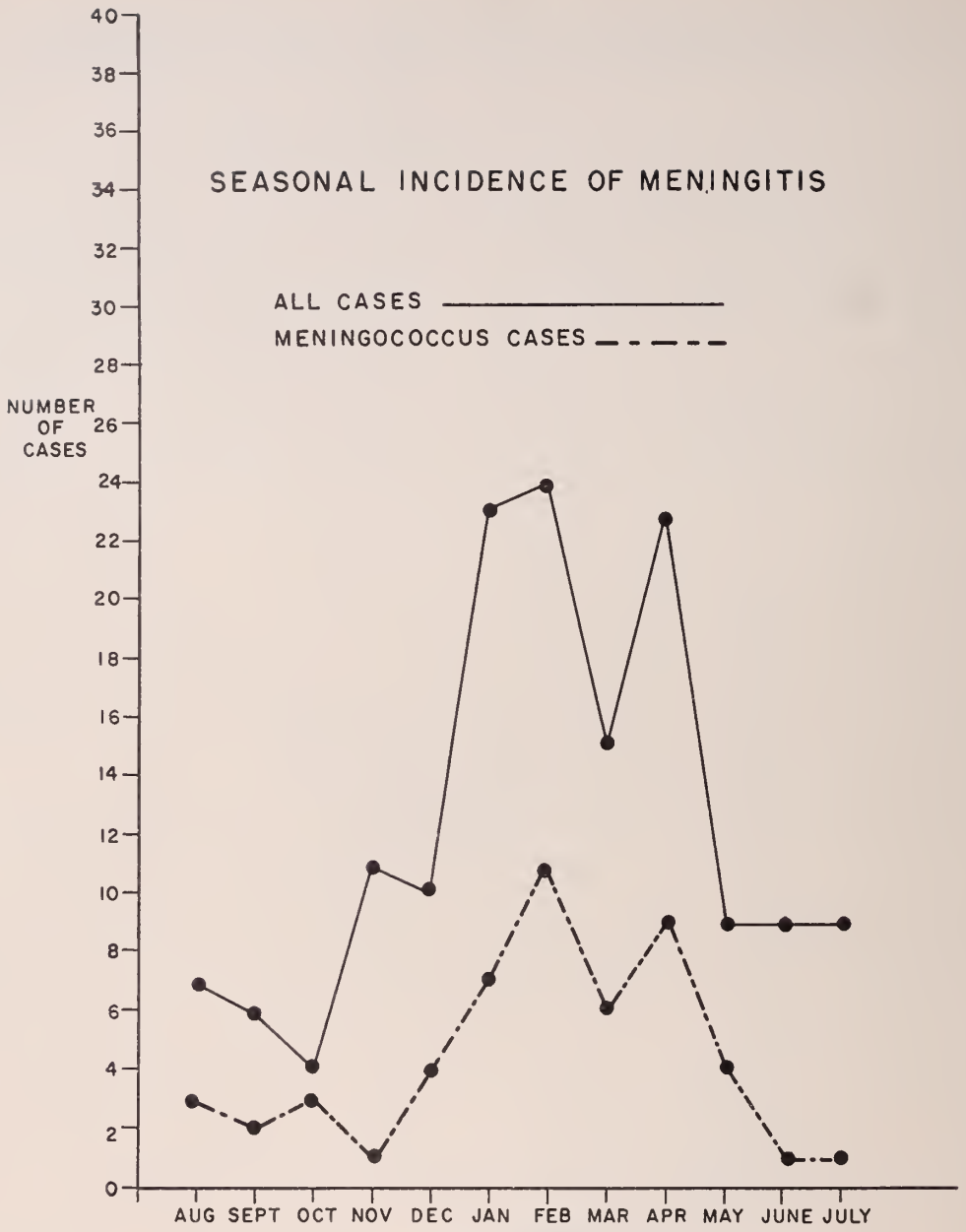


Fig. 2

ETIOLOGY

The largest percentage of the patients had meningococcal meningitis. 23.3% of the children had an Hemophilus influenzae infection. 28% had meningitis and no organism could be identified. The pneumococcus was involved in 9.3% of the cases. E. coli, Proteus, Pseudomonas, and Salmonella caused the remaining 4.7%.

All of the cases due to E. coli were in premature infants. There were eighteen infants under two months that had meningitis. Pneumococci and H. influenzae are supposed to be rare offenders in this age group, but we found four cases of each.[5,6]

SYMPTOMS AND SIGNS

As would be expected, fever and stiff neck were the most common findings. (Fig. 3) However, *only 40% of the children under 3 months of age had a stiff neck!* Many of the infants brought in with the history of a "cold" had had sporatic doses of penicillin or sulfa drug for about a week. Almost invariably they were found to have severe H. influenzae infections and responded poorly to specific therapy.

Subnormal temperatures, jaundice, failure to gain weight, cyanosis, and listlessness were about the only findings in the prematures and newborns with men-

ingitis. A bulging fontanelle was noted in only ten of the eighty-five children under two years of age.

Fig. 3

Symptoms and Signs

	No. of Cases		*No. of Cases*
Fever	144	Stiff Neck	113
Listlessness	56	Petechiae	36
Vomiting	52	Convulsions	23
Headache	46	Strabismus	13
Irritability	40	Bulging Fontanelle	10
Anorexia	39	Coma	10
"Cold"	28	Shock	7
Diarrhea	13	Paralysis	5
Cyanosis	5	Failure to gain	2
Subnormal Temp.	3	Jaundice	1

LABORATORY FINDINGS

A lumbar puncture done on admission to the hospital revealed over 1,000 cells per cu. mm. in about 90% of the patients. The highest count was 38,000 in a patient dying of H. influenzae. The cells seen in the spinal fluid were predominantly polymorphonuclears on admission. When repeat spinal taps were done a few days after onset of therapy, the total cell count was usually lowered. In some cases, the lymphocytes became the predominant cells, but more often they were "polys". No clinical correlation of this phenomenon was found.

The spinal fluid protein was above 75 mgm.% in more than half of the cases. The spinal fluid glucose level was below 40 mgm.% in about half of the children tested. The *ratio* of spinal fluid glucose to the blood glucose level is more important than an isolated spinal glucose finding.

Ferguson and Barr[7] reported the occurrence of glycosuria in meningitis. This was due to a temporary rise in the blood glucose level. We found eight such cases that had not had any previous glucose therapy.

The peripheral white cell count in ninety-two cases was more than 15,000. The count ranged from 1,500 in a three day old infant to 49,000 in an older child.

THERAPY

The patients at M.C.V. have all been treated individually, but the choice and dosages of antibiotics followed a similar pattern. The meningococcal infections were treated with penicillin and sulfadiazine. Penicillin is probably not necessary, but we still favor its combination with the sulfadiazine. Usually a dose of one million units of crystalline aqueous penicillin was given on admission. This was by intravenous or intramuscular route, whichever was handiest. After a few injections of the crystalline penicillin, it was discontinued and the cases were then maintained on up to 800,000 units of repository type of penicillin daily for six to eight days. The drug of choice, sulfadiazine, was given intravenously or subcutaneously using 30 to 45 mgm. per pound body weight. This was followed by 90 mgm./lb./24 hours for six to eight days. The daily dose was divided and given at four or six hour intervals either subcutaneously or orally. It has been stated that only a single intravenous dose of sulfadiazine is needed to treat meningococcal meningitis[8], but we do not advocate this therapy.

The H. influenzae cases received chloramphenicol and sulfadiazine. The sulfadiazine administration was as described in the treatment of meningococci. The chloramphenicol was given intravenously using 10 mgm. per pound repeated every 6 hours for four to eight doses. This initial therapy was followed by oral crystalline chloramphenicol[9] or its palmatate ester 25 to 50 mgm. per pound per twenty-four hours in four divided doses for ten to fourteen days.

Pneumococcic infections were treated with large quantities of penicillin plus sulfadiazine. They were usually given one million units intravenously, then one million units intramuscularly every three hours for at least seventy-two hours. This was then changed to a repository type of penicillin up to 1,600,000 units every eight hours for fourteen days.

Infants with meningitis due to unknown organisms were given a combination of high doses of penicillin, sulfadiazine, and streptomycin. This combination has been changed in the past year to the use of chloramphenicol rather than streptomycin. The drugs were given as outlined for other types of meningitis.

COMPLICATIONS

Ten children were left with hydrocephalus and/or severe mental retardation. Complete or partial deafness occurred in five cases (Fig. 4). A sixth nerve paralysis was present in three children. Since no

Fig. 4

Complications

Subdural Effusion	26
Deafness (complete)	2
Deafness (partial)	2
Hydrocephalus	5
6th Nerve Paralysis	3
Mental Retardation without Hydrocephalus	3
Aphasia (partial with gradual improvement)	2
Mental and developmental regression	2
Behaviour Problem	1
Facial Paralysis	1

intensive follow up examinations have been done, we don't know how many cases of mild mental retardation, convulsive disorders, and behavior problems occurred in children thought to have been successfully treated.

Subdural effusions were found in twenty-six of the cases investigated. It was interesting to note that only three children were recognized to have effusion from 1951 to 1954 in our hospital. In 1954, the staff found twelve and in 1955, they found fourteen. This is probably due to an increasing awareness of this complication which was reported by McKay and his associates in 1950.[10] The effusions lasted an average of six days with repeated taps. The range was from one to sixteen days. Eight craniotomies were performed when recovery was not evident with repeated taps. All eight cases had large collections of fluid estimated at thirty to fifty cc. A membranous sac that continued to fill with fluid was removed in four of these eight cases.

Only ten children who had a subdural effusion were discharged apparently well. There were two that died, four that developed hydrocephalus and mental retardation, and six that were severely retarded without hydrocephalus. The other four cases were left with 6th and 8th nerve damage, partial aphasia, and convulsive disorders. There was one child that had a membrane stripping operation that seemed to recover completely.

A few other interesting facts about the effusions were:

(a) The total protein in one half of them was above 500 mgm. %
(b) The average protein concentration was 983 mgm. %.
(c) The larger the collection of fluid, the higher the protein concentration. (In general this was true.)
(d) One half of them appeared purulent when initially tapped.
(e) H. influenzae caused 10 effusions, while the pneumococcus caused 6.
(f) Effusion occurred in three cases of meningococcal meningitis.

OTITIS MEDIA

When these children were admitted, thirty-four had otitis media. Most of the ear problems improved on antibiotic therapy. However, nine had mastoid operations. The operations were done because of the presence of a draining ear, fever which failed to respond to therapy after four days, coma, or focal neurologic signs.

The results of the operations were striking. In seven cases the fever promptly subsided, their general condition improved, they began taking nourishment by mouth and were able to leave the hospital within ten days. Two infants who were found to have a break through into the subdural space died. Smith stated that at Charity Hospital, only one mastoid operation had been done in recent years because of meningitis.[1] These patients may improve slowly with intensive antibiotic therapy without operation. However, we feel that the length of hospital stay, and possibly the serious complications, will be lessened by early operation.

MORTALITY

We feel that our over all mortality rate was good. We had eleven who did not survive (7.3%). Including four children who died of septicemia and circulatory collapse before developing meningitis, the death rate was 9.7%.

Even though the mortality rate was low, remember that 6.7% of the patients were discharged as hopeless mental defectives. These distressing results were primarily due to delay in onset of adequate therapy.

SUMMARY

1. 150 cases of bacterial meningitis from birth until 14 years of age were reviewed.
2. More cases occurred in the month of January than in any other month.
3. 60% of the children under three months of age did not have a stiff neck.
4. Subdural effusion was present in 17.3% of the patients.
5. 38.5% of the children that had subdural effusion recovered completely.
6. Otitis media must not be ignored when a patient has meningitis. Mastoidectomy should be considered in a refractory case.
7. With good nursing care, proper antibiotic therapy, early recognition and treatment of complications, a life can be saved. The chief problem is early diagnosis before irreversible brain damage has occurred.

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"Cult of Manliness" Suicidal

The medical director of a large industrial firm has blamed the "suicidal cult of manliness" for the "rat race" in which many American men find themselves. Writing in the American Medical Association's January Today's Health, Dr. Lemuel C. McGee, Wilmington, Del., said the average lifetime of men is about four years less than that of women, mainly because of the stress under which men live.

The use of a "little common sense" could eliminate many of the tensions and stresses, providing a healthier and longer life for most people. "The American male has been indoctrinated with the philosophy that he must live, work and play at a dizzy pace, that he can and should wade through all emotional and physical situations without flinching and without reflection."

Every man and boy must live within his own resources of physical and mental strength, but many fail to do so because of the cult of manliness. They drive themselves to the point of exhaustion in work, play, social activities or a combination of these. This could be avoided by reasonable attention to the use of spare time and intelligent effort at recreation.

Dr. McGee pointed out that the exercise and recreation should be matched to the individual's physical condition and personality. "Your activities should be those suited to you. You should enjoy a full mental and emotional life from participating in them. Does the workout in the gym aid your subsequent rest by promoting a pleasant frame of mind and a relaxed body? Or do you force yourself to some irksome struggle as a form of self-discipline or as an effort to impress yourself and others with your manliness? Consider seriously whether your fatiguing activity is merely a sop for your ego."

Recreation is greatly needed in the growing complexity of modern life with its annoyances and frustrations, alarming headlines, and confused politics, philosophies and ideas. But that recreation should be one that the person really enjoys and does because he wants to, not because someone expects him to.

"If it is fun to daub paint on the canvas, go ahead and do it and let the other guy sneer. The importance of leisure activity lies not in what the world thinks of the result, but in what you put into it yourself."

Dr. McGee is medical director of Hercules Powder Co.

Endocrine Control of Advanced Breast Cancer

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THE EXTENT OF THE PROBLEM

OUT OF EVERY HUNDRED WOMEN presenting themselves to their physician with breast cancer about twenty will be inoperable. Out of the eighty patients undergoing radical mastectomy, approximately fifty can be expected to show recurrent or metastatic disease. Therefore, seventy of the original group will be candidates for palliative treatment. Several palliative techniques are available which, if used in proper sequence, will benefit more than half of these patients.

RADIATION

The benefits of radiotherapy must be considered in selecting patients for hormonal treatment. Radiation is the most widely used and most successful palliative agent. It may be expected to yield regression of disease in 65% of irradiated tumors.[7] Radiation is most useful in palliation of localized disease or symptomatic areas of widespread disease. The results of palliation for the bone pain of osteolytic bone disease are excellent. In general, radiation should not be used as the first palliative therapy in premenopausal women or in any patient with widespread aggressive disease. Pre-menopausal women with even local recurrence deserve oophorectomy and the effect of this procedure may prove a useful guide to further therapy. In patients with widespread disease, hormonal control is more likely to give widespread benefit. When such procedures have been instituted and evaluated, radiation may be a valuable supplement.

HORMONAL CONTROL

Surgical alteration of endocrine function and exogenous hormonal therapy will be discussed together under hormonal control. In our experience such treatment is frequently undertaken as token therapy in order to fulfill the demand of the patient or her family that "something be done". As a result of this attitude the therapy becomes formalized with little effort to evaluate the results or to employ a rational sequence of therapy. This attitude is not justified since at least half the patients suffering from advanced breast cancer may enjoy significant hormonal palliation.

Optimum hormonal palliation requires careful evaluation of the patient, the extent of disease, and the rate of progression of the tumor. The extent of treatment must always be consistent with the gravity of the disease.

EVALUATION OF CANDIDATE FOR HORMONAL CONTROL

The history will reveal the story of the primary tumor, the symptoms of recurrence, and the menstrual history. Onset of progressive bone pain may indicate osteolytic involvement even in the absence of roentgen evidence. Onset of polyuria, polydipsia, bone pain, nausea, vomiting, and deterioration may suggest hypercalcemia resulting from rapid neoplastic osteolysis.[5] Weakness, bruising, or bleeding may suggest bone marrow involvement. Neurologic complaints may be the forerunner to objective evidence of brain or cord involvement.

The physical examination should include careful description and measurement of all manifestations of tumor. In soft tissue disease such measurement may be the only means by which the response to therapy can be evaluated. Bone tenderness should be carefully looked for since osteolytic tumor may sometimes be suspected from this finding when radiologic examination is negative.

Laboratory examination need not be elaborate. The presence of marked anemia, especially with the appearance of nucleated red cells indicates an examination of the marrow for tumor cells. Myelophthisic anemia due to metastatic breast cancer carries an ominous prognosis[9] and may indicate radical efforts to control disease. In myelophthisic anemia the platelets count and bleeding time should be estimated since a bleeding tendency will add to the risk of ablative surgery. If osteolytic bone disease is present, the rate of progression of disease may be estimated by means of simple calcium studies[5]. The patient is placed on a low calcium diet and on the fourth day a twenty-four hour urine collection is done. An ambulatory person without bone disease will excrete 150 mg. calcium or less in twenty-four hours.

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One gram of bone contains about 100 mg. of calcium which is excreted when this much bone is destroyed by tumor. When more than 500 mg. of calcium are excreted daily, hypercalcemia is usually present. Severe hypercalcemia is an immediate threat to life and demands prompt treatment[2]. The serum and urinary calcium provide an adequate measure of the rate of progression of osteolytic tumor and the response to therapy. Study of urinary or blood hormone levels does not provide information of immediate clinical use at this time.

Needless to say, histological evidence of recurrence should be obtained if at all possible before undertaking hormonal therapy.

THE PRE-MENOPAUSAL PATIENT

The primary treatment for recurrent or metastatic disease in this group should be oophorectomy regardless of histological type or rate of progression. Almost half[6] of the patients will show objective improvement following this procedure. If progressive osteolytic bone disease is present so that the patient manifests hypercalciuria, an abrupt fall in urinary calcium will often herald by many weeks an impressive clinical improvement[5]. If the predominant disease is in the soft tissues careful observation is necessary to determine whether remission has occurred. Following castration at least two months should be allowed for clinical manifestation of remission before starting further therapy. Unirradiated cutaneous lesions serve as excellent indicators of the endocrine sensitivity of the tumor when they regress following ablative surgery. Bulky or ulcerated lesions are deceptive indicators of clinical response because of slow regression. Radiation castration is definitely less desirable than surgical castration. Remission has followed the surgical removal of previously irradiated ovaries. If oophorectomy fails to achieve remission in the premenopausal patient, the tumor is not estrogen sensitive and it is very unlikely that adrenalectomy will be of benefit.

The treatment of choice in the patient who has failed to respond to oophrectomy depends on the gravity and rate of progression of the disease. High dose cortisone (300 mg. daily) may produce prompt but short lived remission in some patients too ill to undergo hypophysectomy or wait for the delayed benefit of gonadal steroid treatment.

Radiation therapy is the treatment of choice in castration failures manifesting either localized disease or widespread quiescent disease with localized symptomatic areas. Hormonal therapy should not be employed in castration failures if the patient is asymptomatic. The patient has little to gain and suffers either the risk of surgery or of stimulation of the growth of tumor by exogenous hormone.

In castration failures with symptoms due to widespread tumor growth exogenous hormone therapy may be of benefit. Oral stilbestrol, fifteen mg. daily in three divided doses or testosterone propionate in oil, 300 mg. weekly in three divided intramuscular doses may be used. Once started, exogenous hormonal therapy should be continued for two months before concluding that it is not of benefit. However, if obvious regression occurs during treatment the hormone should be continued until relapse develops. Unfortunately, this relapse usually occurs in less than a year.

Stimulation of the growth of tumor by exogenous hormone is a definite possibility. If the disease lies in soft tissues, stimulation is manifested by pain, swelling, and systemic deterioration. If osteolytic bone disease is stimulated hypercalciuria results. If stimulation occurs, treatment should be promptly stopped.

Estrogen therapy should never be given to premenopausal patients if it is not certain that they have failed to attain remission by castration because of the high probability of stimulating the growth of cancer. Testosterone and stilbestrol produce salt retention and may require appropriate restriction of dietary sodium. Testosterone often increases libido, occasionally to a degree which makes it necessary to withdraw treatment.

It is not known whether pre-menopausal patients who fail to attain remission by oophorectomy and exogenous hormone therapy may derive benefit from hypophysectomy. The operation should not be done in patients with metastatic brain disease or those with a bleeding tendency due to myelophthisic anemia. Hypophysectomy will be discussed further in a forthcoming article in this journal.

The pre-menopausal patient who responds to oophorectomy and then suffers relapse has a fair opportunity for further remission. About half of these patients will derive benefit from adrenalectomy[8] or hypophysectomy[4,1,3]. It is not known which procedure is best after oophorectomy relapse. If adrenalectomy is done with remission and subsequent relapse, further benefit may be derived from hypophysectomy. However, it is possible that hypophysectomy done at the time of castration relapse may

contribute remissions as long as those derived from adrenalectomy and hypophysectomy in sequence. Further studies are necessary to clarify this question.

Testosterone may induce remission in patients who have relapsed from the benefit of oophorectomy. Since the probability of remission is less with testosterone than with ablative procedures we prefer to reserve it for cases unsuitable for surgery or for patients who have relapsed from the benefits of further endocrine ablation.

Occasionally a patient may derive benefit from a rapidly induced but short lived remission. Severe hypercalcemia due to rapid osteolysis or bleeding from platelet deficiency due to marrow involvement are examples of such clinical situations. Cortisone, in doses of 300 mg. daily may induce remission in about a fifth of the patients. Because of the brevity of remission its use is best restricted to the treatment of very ill patients in order to prepare them for ablative surgery.

THE POST MENOPAUSAL PATIENT

The endocrine treatment again depends on the extent and rate of progression of the disease. In patients manifesting localized disease amenable to radiotherapy, hormonal treatment should be withheld and radiation given a careful trial. There is no evidence at present that patients with asymptomatic metastases are benefited by hormonal treatment. Until this point is clarified, it would be wiser to defer treatment in this group. Treatment should not be deferred in symptomatic patients. The endocrine modalities available are combined adrenalectomy and oophorectomy, hypophysectomy, testosterone, estrogen, and cortisone. The probability of worthwhile remission is higher with the ablative procedures than for exogenous hormonal therapy. At present we employ ablation at the time of symptomatic proven widespread metastases. The probability of remission following castration in the post menopausal patient is about 10% while combined oophorectomy-adrenalectomy gives a remission rate of 65%[6].

In the near future we will publish our preliminary experience with hypophysectomy as the first palliative treatment for widespread disease in the post menopausal patient. This procedure, which carries a low mortality and morbidity, removes the trophic hormones of the ovary and adrenal. It also removes the source of growth hormone which may stimulate certain tumors. Impressive remissions can be attained. Too few data are available to determine whether hypophysectomy should be reserved for adrenalectomy relapses or should be used as primary palliation. Hypophysectomy does produce remission in patients who have attained adrenalectomy remission and relapsed. Exogenous hormone therapy may be used in the post menopausal patient who has relapsed from, or has not benefited by, ablative surgery. It is useful in the treatment of patients not suitable for ablative surgery. The dosage and precautions are outline in the discussion of the premenopausal patient. In patients ten or more years postmenopausal, estrogen is the exogenous hormonal treatment of choice.

COMMENT

Inoperable breast cancer represents an exciting challenge to the physician. At present, objective palliation is possible in more than half of patients with widespread disease. The study of relapse mechanisms in these patients cannot help but provide longer periods of effective palliation. Very possibly, further study will alter the sequence of endocrine treatment advised here.

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Paraplegic Pressure Sores

Treatment and Prevention

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PARAPLEGIC PRESSURE SORES are a direct result of pressure with resulting ischemic necrosis and ulceration of the skin. The pressure and sores occur over bony prominences below the level of spinal cord injury.

The bony prominences are the sacrum, spines of the ileum, ischial tuberosities, patella, heels and malleoli.

PROPHYLAXIS

All pressure sores can be prevented by good nursing care with medical supervision while the patient is in the hospital. Good nursing care consists in frequent change in position, massage to the skin, and exercise of the extremities to prevent contractures. However, good nursing care is relatively rare and decubitus ulcers are the end result.

The usual picture in a small general hospital, and even in our larger hospitals, is that of a paraplegic who deteriorates rapidly due to pressure sores, mainly due to the lack of strict medical discipline. Ischial ulcers occur after the previously bedridden patient is allowed to sit in a wheel chair. These ulcers come from the lack of instruction as to how to sit and on what to sit.

Our main concern is with ischial ulceration. As previously stated, these sores develop from pressure. Because the cord has been cut, the gluteal muscles lose their innervation and atrophy takes place. There is also severe weight loss and the tuberosities become extremely prominent. However, these bones must bear the weight of the sitting paraplegic and they measure only about one square inch on each side. The average paraplegic trunk weighs 120 pounds and so each tuberosity must support 60 pounds.

To get around this tremendous sitting pressure, we have devised a board with the central posterior portion cut out, overlaid with a 3-inch foam rubber cushion. This, thereby, transfers the pressure to the posterior aspect of the femurs which are relatively flat and measure about 10 square inches. This board reduces the sitting pressure from 60 pounds to 6 pounds per square inch. We also drop the foot pedals as low as possible until the paraplegics heels barely touch; thus, we move the center of gravity off the head of the femur down onto the shaft. Each board is measured 1 inch lateral to the tuberosities of the ischii and enough clearance is given forward to allow for scrotum, catheter, etc.

At Woodrow Wilson Rehabilitation Center in Fishersville, Virginia, we have measured over 800 paraplegics for boards without a single incidence of ulceration.

Our experience has taught us that the foam rubber cushion alone is not the answer. We feel that the board is as important as the catheter, the antibiotic, or the wheelchair.

But more important is what we call "wheel chair discipline". This consists in the paraplegic doing "push-ups", or completely raising his buttocks from the chair by "standing on the heels of his hands". This allows for circulation and reoxygenation of the tissue of the buttocks. All paraplegics entering the Center are thoroughly indoctrinated in this technique, and we have thus been able to continue their vocational objective free of ulceration.

PATHOLOGY

The pathology involved in an ulcer is simply ischemic necrosis due to pressure, with anoxia due to capillary collapse. Necrosis takes place between the intrinsic and extrinsic pressure points: that is, the bone and the chair.

A protective bursitis occurs after prolonged pressure which is similar to what is seen in housemaids knee or bar-man's elbow. The bursa soon ruptures due to internal pressure and a hyperplastic polypoid reaction occurs. These polyps sometimes become very large and exceed their blood supply and slough off.

The periosteum next becomes infected and then the bone shows an osteomyelitis.

TREATMENT

Various attempts have been made to correct these ulcers none of which has been too successful due to the periostitis and osteomylitis present. Shaving the tuberosity is not the answer because the bone is

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triangularly shaped and this leaves even a sharper edge to cause pressure later. Some have done subperiosteal resections, hoping new bone would regenerate along the periosteal guide. However, a definite periostitis is present and this technique leaves infected material behind.

We have handled a great number of paraplegics surgically, and indeed have made all the mistakes possible. But in the last four years, we have decided to attach the problems in a radical manner and this approach has been extremely successful. This radical approach consists in removing the ulcer and the ischial bone with the inferior pubic ramus from the lesser sciatic notch to the symphysis.

The operation consists in completely excising the ulcer, removing all tendonous attachments to the ischial bone and dissecting the bone free in an extraperiosteal manner. The ulcer must be opened as it overlays the bone and it will be seen to be about six times the size of its superficial opening.

The bone is removed with an osteotome at the lesser sciatic notch and at the inferior pubic ramus. Both sides are usually done at the same operation if the patient's condition allows. Blood loss is moderate. Raytec sponges are used and a sponge count is done before and after operation for obvious reasons.

A large dead space then exists and if all the scarred skin and subcutaneous tissue has been removed, the atrophic muscles of the buttocks can be sutured to the detached atrophic hamstrings and the skin closed without tension. Drains are used for 7 days to establish a route for collections of blood and marrow. Drainage is rather profuse for 14 days, gradually diminishing and stopping on the 21st day. Chromic catgut is used in the deep tissue and wire used on the skin. We remove the sutures on the twenty-first day and allow the patient to sit on the thirtieth day.

Even after operation, we advise the use of the chair board and the cushion, and demand continuation of the push-up exercises.

We must say that a great deal of the success of this operation is due to the intelligence of the patient. However, further ulceration can occur from bruises received in bed, automobile seats, commodes, etc. We have devised various appliances to handle these problems and they are such that the patient can make and use them at home.

Elaborate plastic surgery such as adjacent flaps, pedicled flaps, etc., has been avoided on the theory that simple closure is adequate and successful if the offending bony prominence has been removed.

There is no interference after the operation with the use of braces in exercise.

The sacrum is attached in the same radical manner. The coccyx, lower sacrum and ulcer are removed followed by primary closure.

The great trochanter is removed at the neck of the femur with the ulcer, and again primary closure can be accomplished. The patellas, spines of the ileum and malleoli can also be removed with relative impunity.

It must be emphasized that the cooperation of the patient is extremely necessary and this is why the Veterans Administration work with paraplegics is so frustrating and usually shunned by the residents.

These procedures of bone removal are not recommended in anyone not a paraplegic, as good nursing care will usually heal these, especially in the chronically ill young and debilitated aged.

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Collections Reach All-time High

"The collection percentage of the typical U.S. physician is higher than it's been at any time in the past twenty years."

So says *Medical Economics* in a report on physicians' collections, in its November issue. The magazines bases its conclusion on figures obtained from its 8th Quadrennial Survey.

In 1955, it observes, the typical doctor "collected nine-tenths of what his patients owed him. This compares with only three-fourths back in the depression year of 1935."

Specialties with the highest collection ratios are industrial practice and dermatology, *Medical Economics* reports. The survey shows that men in these fields collect 99 and 94 per cent, respectively, of their accounts.

Clinicopathological Conferences

Of The Medical College of Virginia Hospital

Prepared and Edited by

GORDON HENNIGAR, M.D.
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Case #188 (A-6911)

A FIFTY-ONE-YEAR OLD white male entered the Medical College Hospital because of progressive weakness and weight loss. He had stopped work as a boilermaker approximately six months earlier because of gradually increasing weakness and loss of appetite. About six weeks before admission he began to notice increasing swelling of both legs and shortly thereafter also noted that his urine was dark-colored and that his stools were black. Weakness became so severe that he was forced to go to bed about two weeks before admission. During this time he had lost from 30-40 lbs. He denied having any nausea, vomiting, pain, change in bowel habits, or cough. Chest x-rays three weeks before admission showed some infiltration in the right 2nd interspace and left 4th and 5th interspaces which had improved on a subsequent film taken approximately one week before admission.

The patient had been a fairly heavy drinker prior to the onset of his illness. His mother had died at age 30 with pulmonary tuberculosis. The past and family histories were otherwise non-contributory.

Physical Examination: T. 98, P. 76, R. 20, B.P. 114/60. The patient was a gaunt, slightly jaundiced male, appearing much older than stated age. He was somewhat deaf, but mentally clear. The skin showed marked loss of turgor but, except for icterus, was otherwise negative. The teeth were absent, the tongue was dry and smooth, and there were mild excoriations around the mouth. The chest was moderately emphysematous, expanded poorly, and there were atelectatic rales in both lung bases. The heart was normal. The abdomen was scaphoid and non-tender. The liver was palpated three fingers breadth below the right costal margin, was firm and slightly tender. Liver dullness extended upward to the 4th intercostal space anteriorly. The prostate was slightly enlarged and somewhat nodular, but of normal consistency. Feces was dark green in color. There was 2-3+ edema of both legs with thrombotic varices noted in the left calf. The remainder of the physical examination was essentially negative.

Laboratory Data: Urine: Amber, acid, 1.020, 1+ albumin, occasional WBC/hpf. RBC 3.5 million, hgb. 11.5 grams, WBC 29,200 with 90 polys., 3 eos., 4 lymphs., and 4 monos. The blood smear showed "macrocytic, normochromic RBC with some polychromasia—leukocytosis with increased hypersegmented forms, a few band forms, occasional myelocyte and promyelocyte with eosins increased and toxic granulation present". NPN 44 mgm.%, fasting blood sugar 139 mgm.%. Prothrombin concentration 43%. Serum bilirubin 0.9 direct, total .4 mgm.%. Urine urobilinogen was moderately increased and "largely of the levorotatory type". Urine was faintly positive for bile. Cephalin flocculation 3+. Cholesterol 195, esters 94. Total protein 6.6, albumin 2.0, globulin 4.6. Serum acid phosphatase 3.6 B.U. Chest x-ray showed infiltration in the 2nd right and 4th left interspaces. G-I series was reported as showing a constant annular filling defect in the antrum of the stomach 1½ cm. in width and 6-7 cm. from the pylorus. The esophagus and duodenum were normal.

Three days after admission edema of the right leg increased markedly and the right great toe developed a purplish discoloration. At about the same time it was noted that there were purpuric areas over both legs and forearms.

The patient became steadily worse—became confused, incontinent, progressively weaker and oral feedings were impossible. His temperature varied from 97 to 99.8, his pulse from 80-120. The prothrombin concentration remained around 40% in spite of repeated large doses of Vitamin K parenterally. Gastric aspiration revealed free acid and one gastric washing was reported as showing acid-fast organisms on direct smear. Subsequent specimens did not reveal acid-fast organisms and studies

for fungi were negative. Repeated stool specimens were negative for blood and were grossly described as dark brown in color. The NPN rose to 99, the WBC to 40,000 and the patient expired thirteen days after admission. An autopsy was performed.

CLINICAL DISCUSSION

Dr. Robert Edgar Mitchell, Jr.* Since increasing weakness and loss of appetite were first noted by this patient 6 months prior to admission, it seems pertinent to mention leading possible causes of this condition. Homologous serum hepatitis and occult malignancy can both qualify in this instance. The fact that the time involved may not necessarily satisfy incubation time requirements for viral hepatitis is important. Generally the average incubation period of homologous serum hepatitis is between 80 and 120 days, while that of infectious hepatitis is between 3 and 6 weeks. Also, hepatitis associated with viral pneumonia may present such a picture. Amebiasis with hepatitis also must be ruled out, but no elevated eosinophiles were noted and no stool parasites or ova were detected. We are further told that the urine was "dark-colored", another important point for viral hepatitis. The stools are reported as being "black" but we are not told whether any medications such as iron-containing compounds had been ingested; in the absence of such information, I feel that we must presume this to represent gross melena. An alcoholic stool could still have been present—which had been discolored by bleeding into the G. I. tract from any of a number of sites. Increased swelling of both legs could be explained on the basis of lowered serum proteins, especially the albumin fraction, although pancreatic inflammation and or malignancy may show an increased coagulability of the blood so that peripheral thrombus formation in the veins may occur, which, of course, could easily lead to variable degrees of swelling of the legs. The 30-40 pounds weight loss described could have been on the basis of anorexia, with a voluntary reduction in food intake, or malignancy as mentioned above. The absence of pain especially, but also of nausea, vomiting, change in bowel habits, or cough are important in our final estimation of the cause of death in this patient. It would certainly be helpful to know if there was any jaundice during this stage before hospitalization. The findings on chest roentgenography three weeks and one week prior to admission to the hospital speak more for an inflammatory lesion than any other, in view of the reported improvement on the second set of films.

We are told that this patient had been a "fairly heavy drinker" prior to the onset of his illness, but we do not know how long he was a "heavy drinker". This brings cirrhosis into the picture but we know that only 30% of all chronic alcoholics develop cirrhosis. Alcohol is certainly a common precursor of portal cirrhosis but is not necessarily the only or most important predisposing cause. Indeed, acute infectious, (virus) hepatitis may be an important predisposing cause to portal cirrhosis. Portal cirrhosis, per se, has been regarded by many observers as a response to injury. This primary injury might easily be a chronic nutritional deficiency combined with alcoholism, producing the fatty liver which is so essential in the eyes of many pathologists as a prerequisite to cirrhosis.

The fact that the patient's mother died at age 30 with pulmonary tuberculosis is most likely an incidental finding, and probably will not have too much bearing on our case.

Jaundice is mentioned for the first time in the physical examination, in that the patient was described as "a slightly jaundiced male". He was dehydrated, apparently, and showed signs of nutritional deficiency in the oral area. The chest was moderately emphysematous with atelectatic rales in both lung bases. An examination of the one chest x-ray available suggests some small degree of cystic lung disease. The liver was hypertrophied, firm, and tender, but apparently no spleen was palpable. Ascites is not mentioned, so we must assume none was clinically detectable. The enlarged, nodular prostate is an interesting finding, especially in view of the elevated serum acid phosphatase, which will be discussed with the laboratory findings. Feces was "dark green" in color, which could represent enteritis, but we need to know more of the character of the stool before this can be established. 2-3 plus edema of both legs with thrombotic varices noted in the left calf could, as mentioned earlier, have been due to a pancreatic lesion but it must be borne in mind that prostatic gland cancers may metastasize to the deep pelvic lymph nodes and cause edema of the lower extremities. It should be mentioned in passing that advanced carcinoma of the prostate on rectal examination may be such as is described in this case, and that frequently a palpable Virchow's node may furnish a remote clue, although this latter is not mentioned in our protocol.

Leukocytosis of 29,200, with a shift to the left,

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is described in the blood count, which speaks for an acute infectious process, possibly of the bowel, liver, or pancreas. Leukocytosis does not ordinarily occur in uncomplicated liver failure but may suggest a bacterial inflammatory reaction, a neoplasm, or some cause other than a virus. The macrocytic normochromic type of blood smear could be compatible with the picture of portal cirrhosis. N.P.N. of 44 mg.% could be top normal or slightly above normal. Slightly elevated fasting blood sugar of 139 mg.% is frequently seen in inflammatory and carcinomatous lesions of the pancreas. Prothrombin concentrations of 43% probably is indicative of hepatocellular damage, especially in view of the failure to elevate this with parenteral Vitamin K injections. Serum bilirubin is only slightly above our normal limits even though there is a slight relative increase in indirect or one minute fraction. Urine urobilinogen is reported as being "moderately increased and largely of the levorotatory type." I am told that a positive levorotatory urine is indicative of the presence of stercobilin—but would like to hear a comment from Dr. Watson James in this regard as I understand he is especially interested in this test. An increased urinary urobilinogen and bilirubin would tend to go along with findings of hepatocellular damage. Cephalin flocculation test of 3 plus is a frequent finding in cirrhosis. It would be especially interesting to have thymol and zinc turbidity reaction results here also as they may be only slightly elevated in alcoholic cirrhosis. In the presence of an elevated serum globulin, particularly the gamma globulin fraction, the zinc and thymol turbidity reactions are at their greatest intensity and this is encountered more in cirrhosis following acute infectious hepatitis than in the alcoholic variety. Cholesterol of 195 and esters of 94 are not remarkable. It is important to note, however, that the esters are at good healthy level, as they are quite labile and frequently are early heralds in hepatocellular disease processes when falling or very low. A reversed A/G ratio is present. In early hepatic insufficiency due to cirrhosis, the serum globulin concentration will rise, producing little change or a slight rise in the total protein values. Later, the serum albumin concentration will decrease also, lowering the total protein unless the globulin has shown a heavy increase. A liver punch biopsy may have proved very helpful in differentiating what type of cirrhosis was present, if any, and also whether there were any liver metastasis. Serum acid phosphatase is reported as 3.6 Bodansky Units. Normals for this method are 0.0 to 0.4. The presence of serum phosphatase acivity at pH 4.5, of 0.7 to 1.0 units (Bodansky) per 100 c.c., when alkaline phosphatase is normal, warrants suspicion of metastasizing prostatic cancer, and is very probable when exceeding 1.0 unit. If alkaline serum phosphatase is elevated, then a phosphatase activity at pH 4.5 of 1.5 units per 100 c.c. or more often appears pathognomonic of metastasizing prostatic cancer. If the serum acid phosphatase is elevated and alkaline phosphatase is normal, there is a strong likelihood of prostatic carcinoma with metastases to soft tissues but not to bone. Augmented serum acid phosphatase levels generally mean extension of the cancer beyond the capsule. It is important *not* to allow hemolysis of the red cells when performing the test as there may be a liberation of erythrocyte phosphatase into the serum and hence a false high value. If testosterone was being administered, it could conceivably cause elevated serum acid phosphatase also. Amylase and lipase determinations may have proved helpful, diagnostically, but are not shown on this protocol.

I will ask Dr. Mandeville to demonstrate the x-rays but would like to ask if he thinks the pyloric area ulceration looks old or recent? Could it be a stress situation?

Dr. Frederick B. Mandeville*: There is consistent annular narrowing of the pylorus with some mucosal folds seen. There was only slight irregularity of the proximal lesser curvature of the duodenal bulb compatible with ulceration and tumor. No appreciable extrinsic pressure of pancreas on the duodenal loop or stomach was demonstrated.

Dr. Mitchell: Although I agree that these findings are suggestive of pre-pyloric ulceration, it is interesting to speculate on the possibility of this so-called "annular filling defect" being a pancreatic rest, or aberrant pancreatic tissue. The aberrant pancreas, though, is found in most cases in a Meckel's diverticulum which may also contain gastric mucosa and a peptic ulcer. Annular pancreas frequently manifests itself by obstruction signs. The slight anterior projection of the stomach could be due to pancreatic malignancy or other pancreatic lesion. The duodenal loop looks normal to me. The absence of esophageal varices on x-ray does not by any means rule them out. We are able to identify not more than 35-50% of them and then not always with clearcut certainty. A thick barium paste should be used, preferably, and we do not know what technique was employed in this instance.

The increasing peripheral edema and purpuric manifestations detected three days after admission

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could have been on the same basis as described earlier for pancreatic lesions.

The lone gastric washing, wherein acid fast organisms were seen on direct smear, is usually considered unreliable, diagnostically speaking, and probably should be discounted. It is comforting to see the presence of free HCl reported on gastric analysis but the amount would be important also. The report of no further blood in the stools is not particularly disturbing as the site of gastrointestinal bleeding could have closed off. Also, it is helpful from a negative standpoint in that bleeding from a lowered prothrombin level would probably have continued to ooze and not to seal off. Here again, it would be rather helpful to know whether these stools were of the type seen in pancreatic insufficiency. The rising N.P.N. (99) and leukocytosis were apparently terminal events. Such an elevated N.P.N. could be explained on the basis of prostatic obstruction, or even possibly terminal nephritis, while the rising white count could be indicative of worsening sepsis and/or mesenteric vascular occlusion.

The absence of pain in this case seems most important and must be reckoned with. Statistically, pain is moderate to severe in 85% of cases of cancer of the head of the pancreas, 60% of cases of cancer of the bile ducts, almost always present in cancer of the tail and body of the pancreas, and absent in 60% of cases of cancer of the ampulla of Vater; thus, we may be dealing with ampullary carcinoma, although such cases usually demonstrate early, progressive, and marked jaundice. Also, hepatomegaly in these cases is not a frequent finding, and an enlarged gallbladder is found in 50% of these cases (Courvoisier's law), but we have no record of a gallbladder having been felt. It would be nice to be able to make a positive diagnosis of ampullary carcinoma ulcerating into the pylorus but sufficient evidence to warrant such a presumption is not complete. Favoring pancreatic malignancy is that it often occurs in elderly patients without antecedant acute malaise, intermittent colics, or chills and fever. Pruritus is not mentioned. If it has been, and had occurred prior to onset of jaundice, then mechanical obstruction of the biliary passages could be considered likely. Carcinoma of the pancreas is mostly located in the head of the gland and may cause excretory insufficiency of the pancreas and the liver (such as steatorrhea and icterus). Metastases favor the mesenteric and paraortic lymph nodes, the liver, and the lungs. Death occurs early with average survival time being 9 months after discovery of the disease. Ampullary cancers tend to ulcerate and form fistulae between the biliary and alimentary tracts.

Carcinoma of the prostate may arise in any lobe but 70-80% originate in the posterior lobe. Invasion of the seminal vesicles occurs frequently and early. Lymph node metastases are found at autopsy in 60-90% of all cases, especially the hypogastric and iliac nodes, then later the abdominal and periaortic nodes.

In summary then, and despite the fact that less than 5% of all cancers are of the pancreas, I feel that this man had: 1) Carcinoma of the pancreas: a. This lesion cannot be ruled out, especially the ampulla of Vater, with ulceration into the pylorus and metastases widespread. 2) Carcinoma of the prostate gland: a. Probable metastases to the deep pelvic nodes. 3) Cirrhosis of the liver: a) Possibly post-necrotic type combined with alcoholic or nutritional deficiency type. 4) Pneumonitis, bilateral.

Dr. Robert Edgar Mitchell's Diagnosis

Carcinoma of the pancreas with ulceration into the pylorus and widespread metastases.

Carcinoma of the prostatic gland with probable metastases to the deep pelvic nodes.

Cirrhosis of the liver.

Bilateral pneumonia.

Pathological Diagnosis

Carcinoma of the body of pancreas with metastases to lymph nodes, liver, spleen, duodenum, peritoneum and diaphragm.

Thrombosis of external iliac, femoral, pancreatic, splenic and portal veins.

Infarction of lung with abscess formation.

Thrombotic vegetation of aortic valve.

Infarcts of spleen and kidneys.

Gangrene of right great toe.

Adenocarcinoma of prostate.

DISCUSSION OF PATHOLOGIC FINDINGS

Dr. S. H. Choy*: The body of pancreas was completely replaced by a large, white to cream colored tumor with areas of hemorrhage and necrosis. The tumor extended into the head of pancreas, ulcerated the duodenal mucosa and directly infiltrated the peripancreatic fat and the splenic capsule. There were several peritoneal implants of the tumor on the diaphragm and the gallbladder. Microscopically the tumor was a poorly differentiated, mucin producing adenocarcinoma with frequent in-

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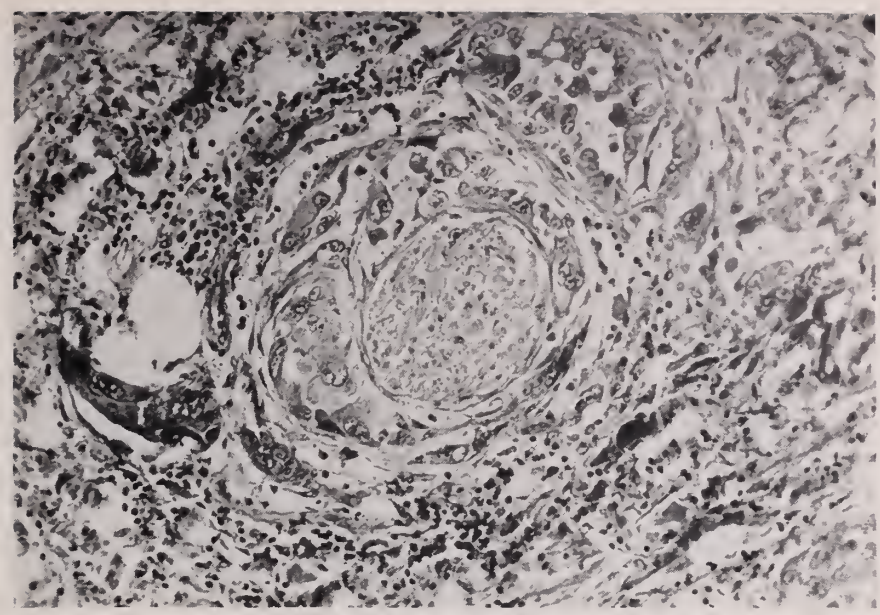


Fig. 1—Invasion of perineural lymphatics by the tumor cells.

vasion of perineural lymphatics (Fig. 1). The regional lymph nodes, mesenteric, gastric, mediastinal and periaortic lymph nodes harbored metastatic tumor tissue. The liver was studded with metastatic nodules and tumor emboli were found in the and around the pancreas were frequently filled with thrombi and many of these vessels showed infiltration of the walls by the tumor cells, which appeared to grow freely within the lumina. The intraheptic branches of the portal vein near the metastatic tumor

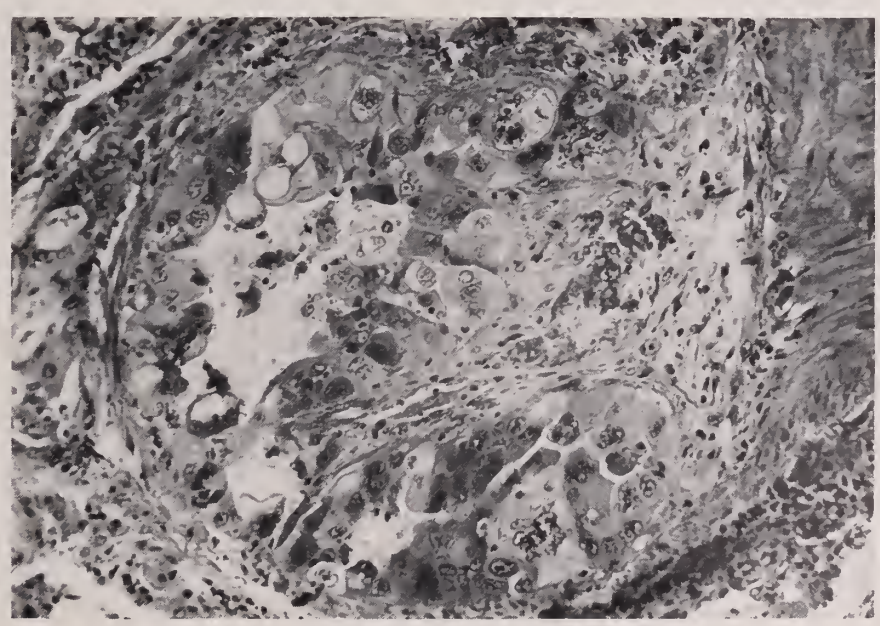


Fig. 2—Tumor emboli in pulmonary vessels.

lung (Fig. 2). No evidence of biliary obstruction was demonstrated.

Associated with the carcinoma of pancreas was widespread thromboembolic phenomenon which was most striking. The blool vessels within the tumor nodules also showed similar findings associated with thrombosis. The thrombosis of these vessels may be explained on the basis of mechanical damage to the vascular walls by the invading tumor. However, the patient manifested clinical evidence

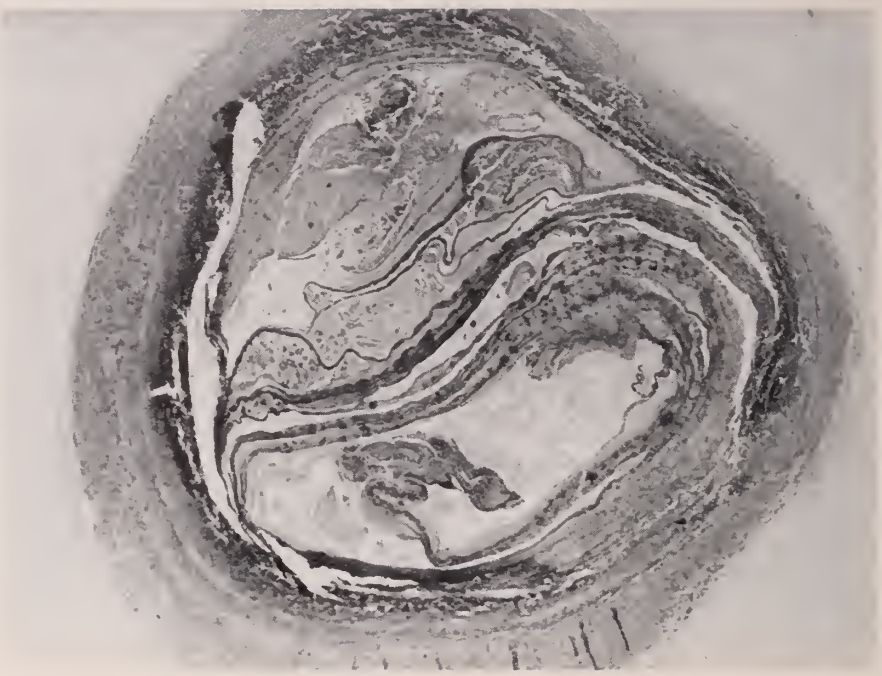


Fig. 3—Laminated thrombus in external iliac vein.

of thrombotic varices in the calf, and at autopsy multiple thromboses of the external iliac and femoral veins bilaterally (Fig. 3). The right middle and left lower lobes of the lung contained abscesses which appeared to be due to secondary bacterial infection in preexisting infarcts. Several large pulmonary arteries near the abscessed areas were occluded by organizing thrombi. Furthermore, on the anterior cusp of the aortic valve was a friable thrombotic vegetation which consisted of platelets and fibrin strands and this was apparently the source of arterial embolism which caused gangrene of the toe, infarcts in the spleen and kidneys.

Association of thrombotic syndrome and various malignant tumors has been known for many decades. In 1938 Sproul[1] pointed out that the highest incidence of thrombosis occurred in association with carcinoma of the body and tail of the pancreas. In her series of autopsy cases forty per cent of patients with carcinoma of the body and tail of pancreas showed multiple thromboses. In recent years there have been reports that findings of idiopathic venous thromboses lead to detection of obscure cancers.

The mechanism of intravascular thrombosis in cancer patients is not clearly understood. Invasion of the venous wall and disruption of the endothelium may induce thrombosis which will propagate and occlude the lumen. The growth of tumor cells within the lumen may also cause thrombosis; compression of venous wall by extrinsic pressure of the growing tumor may result in stasis of blood and facilitate thrombosis; and tumor emboli may set up thrombosis at the sites of their lodgment. However, these seemingly plausible mechanisms do not explain the frequent occurrence of multiple venous thromboses, occasional arterial thrombosis and thrombotic vegetations of the heart valves. All the circumstances point to the probability that there is a state of increased coagulability of the blood and to the assumption that the cancer cells are the source of the substance or substances that induce thrombosis. The metabolic products of the tumor cells within the lumina of blood vessels are discharged directly into the blood stream. Mucin produced by certain tumor cells, thromboplastin-like substances of the tumor cells, and proteolytic enzymes secreted by the tumor cells are thought to be responsible for the clotting of the blood. These theories have some clinical and experimental supporters[2].

Antifibrinolytic activity of the endothelial cells is diminished or absent in many infectious and cachectic states. It was known that the anti-fibrinolytic activity in cancer patients is diminished by administration of "pancreatin". It does not seem too unreasonable to speculate that when the pancreas is atrophic or replaced by nonfunctioning tumor as in this case the absence of "pancreatin" may allow excessive antifibrinolytic activity and a tendency to intravascular thrombosis. Further evidence that the pancreas may affect the blood coagulation

factors is provided by the finding of a disminished antithrombin activity of the blood in cases of fibrocystic disease of the pancreas[3].

Incidental finding at autopsy was occult adenocarcinoma of the prostatic gland which has not caused any demonstrable metastasis.

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TV Program on Blood and Circulation

A new one-hour color television program about the circulation of blood, to be telecast over the CBS network on Wednesday, night, March 20, will be of special interest to the medical profession. Called "Hemo the Magnificent," the production is the second in the Bell System Science Series of programs designed to present authentic information about various fields of science.

"Hemo the Magnificent" dramatizes the story of blood and its circulation, and uses animation, photomicrography, and medical movies. Among other scientific facts, the program explains the anatomy of the circulatory system and the function of the various organs involved, the work of the human heart, and the functions of arteries, capillaries, and veins. The actual flow of blood, seen through a microscope, is presented, and the beating of living hearts is also shown. The structure and operation of the circulatory system is explained by animation.

The program emphasizes that scientific knowledge, as exemplified by the facts that have been accumulated about the subject of blood through the years, is the result of constant hard work on the part of doctors, scientists, nurses, laboratory technicians, and students everywhere.

Frank Capra, the famous film director is the producer of "Hemo the Magnificent." Outstanding scientists in the field of physiology served as special advisors for the program, including Dr. Maurice B. Visscher, University of Minnesota; Dr. Chauncey D. Leak, Ohio State University; Dr. Gordon K. Moe, State University of New York; and Dr. Allan Hemingway, University of California at Los Angeles. A Scientific Advisory Board, composed of nine leading scientists, selects subjects and materials for the entire Bell System Science Series.

Individual companies of the Bell System will make "Hemo the Magnificent" available on request for 16-mm color film showings to interested organizations after the March 20 telecast.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Pilot Study on Diabetes in Virginia

"From every viewpoint—personal, community, economic, and professional—it is urgent that unrecognized diabetes be *discovered* and medical care instituted." This statement is from an editorial, Discovering Unsuspected Diabetes, which appeared in the Journal of the American Medical Association 144:468, 1950. Since it is estimated that there are a million or more persons with unrecognized diabetes in the United States it would seem to be clear that these unrecognized diabetics constitute a major medical problem.

In view of the above, as well as the fact that the principal role of Public Health is preventive medicine, the State Department of Health was interested in the announcement that there is on the market a mechanical laboratory apparatus, called a clinitron, capable of screening 120 blood samples an hour for blood sugar level, using the Wilkerson-Heftman Method. It is emphasized that these determinations are screening and not diagnostic. The screening levels obtainable through the use of the clinitron and certain tablets are 130 mg. per 100 ml. and 180 mg. per 100 ml. and the results only indicate whether the blood sugar is above one or the other of these levels.

A brief explanation of the procedure involved in the use of the clinitron in the laboratory might be of interest. Venous blood (0.1 ml.) is pipetted into a special tube containing 5 cc. of distilled water, and the tube is placed in the clinitron. It proceeds through 7 stations as follows: Zinc hydroxide and potassium iodide in special tablet form are automatically delivered to the tube as it proceeds to station 1, where heat is applied to react with the zinc hydroxide and coagulate the blood proteins. At station 2, steam forces the coagulated protein to the top of the tube where it adheres to the funnel-shaped surface. A special potassium ferricyanide tablet is delivered to the tube as it advances to station 3 where subdued heating keeps the solution boiling gently, well below the protein deposit. This continues at stations 4 and 5. At station 6 the tube is immersed in a water cooling bath where it is automatically shaken. A special tartaric acid tablet is added as the tube advances in the cooling bath to station 7. If the glucose concentration of the blood is below the screening level, sufficient ferricyanide is left unreduced to oxidize the potassium iodide to iodine and this produces a blue color with the starch. If the blood sugar value is above the screening level the liquid in the tube will be clear. No colorimeter is needed.

The State Health Department had for several years conducted mass serologic screening tests for syphilis. In this program Sheppard vacuum tubes were used. From time to time a tube was found to have no vacuum after the veni puncture had been made, and rather than withdraw the needle and "stick" the person a second time, it was found that a second needle could be inserted into the rubber tubing of the first tube and the vacuum in the second tube would pull the blood through. It was known, therefore, that 2 specimens of blood could be obtained with one veni puncture. If blood sugar determination screening were to be added to the serologic screening two separate tubes of blood would have to be used, since a preservative, anti-coagulant would have to be added to the serum drawn for blood sugar determination testing.

With a clinitron machine available, the local medical societies, in those areas where mass serologic screening programs had already been approved, were approached as to whether they would be interested in having a screening test procedure for diabetes added to the serologic screening. The department's purpose was to conduct a few pilot studies to see if blood sugar determination screening, combined with serologic screening was feasible. In each area local medical society approval was obtained and there was a keen interest expressed in almost every instance.

The following procedure has been used almost uniformly where the combined screening programs have been held. Two specimens of blood have been taken on all persons who volunteered and were 35 years old or over. Specimens are not taken for blood sugar determination on those under 35 years old. Each person tested was asked the name of his own physician. This name is written on the laboratory

slips. The specimen with preservative is sent to the State Laboratory and run on the clinitron using the tablet which screens at the 130 mg./100 ml. level. Since the blood specimens are taken at random hours after eating, a considerable number of the positive tests do not indicate diabetes. Regardless of this fact, all persons with positive tests have been referred to their own physicians for further tests and study. A very brief question sheet was sent to the physician asking that he check whether the patient had diabetes and if diabetes, whether previously known. Of the 327 persons whose tests screened positive, 287 have been seen by their physician and the question sheets have been returned. There follows a brief statistical resume of the results of this screening program to date.

Total Tested: 13,968

	Screened Positive	Seen by Physician	Cases of Diabetes	Cases of Diabetes Previously Unknown
Number	327	287	110	58
Percentage	2.34	87.8	38.3	52.7

None of the persons whose screening tests were reactive at a level of 130 mg./100 ml. have been retested, diagnosed, or treated by a health department facility with the exception of 3 or 4 in one of the cities. These 3 or 4 patients were referred to the health department by the patient's physician with the request that retests be made for the patient.

Monthly Report of the Bureau of Communicable Disease Control

	January 1957	January 1956
Brucellosis	0	0
Diphtheria	0	1
Hepatitis (Infectious)	31	62
Measles	314	957
Meningococcal Infections	9	7
Meningitis (Other)	22	15
Poliomyelitis	1	0
Rabies in Animals	30	32
Rocky Mt. Spotted Fever	0	1
Streptococcal Infections	427	577
Tularemia	9	1
Typhoid Fever	4	0

Enriched Bread

Enriched bread, constituting about 90 per cent or more of the national white bread output of the baking industry, represents an important factor in the protection of the nutritional health of America. Eaten three times a day by almost everybody, it contributes significantly to metabolic needs for the vitamins thiamine, riboflavin, and niacin and the essential minerals iron and calcium. Attributable in considerable part to this nutritional enhancement of the nation's dietary, frank deficiency disease due to insufficient intake of the B vitamins now occurs only rarely and sporadically.

Although the enrichment of white bread is not mandatory under Federal law, the composition of enriched bread, wherever sold, is fixed by official regulations at definite levels of the three contained B vitamins and of iron. These levels are stipulated in the definition and standard for enriched bread adopted under authority of the Federal Food and Drug Act. At present, the food laws of 27 states make it compulsory that all white bread sold within their boundaries shall conform to the Federal standard. In the other states almost all bakeries voluntarily bake only the enriched form of white bread.

Another valuable component of enriched bread is its contained dry nonfat milk. On the average, baking formulas include 4 pounds of this milk derivative for each 100 pounds of flour. Owing to the supplementary value of the milk protein, the protein of enriched bread is capable of inducing good growth of tissues and their excellent maintenance.

Enriched bread, by modern nutrition criteria, constitutes one of the nation's valuable everyday foods.

Mental Health . . . .

HIRAM W. DAVIS, M.D.
Commissioner, Department Mental Hygiene and Hospitals

Helping to Prevent Delinquency

As psychological and psychiatric knowledge has increased, it has become increasingly evident that there is no single cause of juvenile delinquency (or, indeed, of criminality in adults). But it has, likewise, also become clear that certain factors which occur in childhood have important causative significance, even though they are by no means the only causes.

The behaviour of a growing person, whether it be normal and acceptable or abnormal and unacceptable, is always the result of numerous factors which operate throughout the life of that individual. He develops in early life certain characteristics. These characteristics become increasingly more fixed as his age becomes greater, both through the processes of growth and those of interaction with the environment. It is, indeed, true that many of the basic causes of abnormality are to be found in personality difficulties which take their origin early in life. On the other hand, the particular form in which the abnormalities are manifest is often a result of later development, that is, of the interactions between the individual's personality and the environment in which he lives.

Thus it would appear that the things which happen to an individual during his childhood are important in determining the pattern of his later life. This is quite clear because it is evident that during childhood there are built up types of reactions we call personality. In childhood a pattern is formed from which later deviations are rare and take place only under extreme stresses of environmental situations. It is in childhood that the individual is most plastic. Without laying down any immutable principle of personality being fixed and determined within a certain number of years or by a certain age, we can readily say that more can be done to determine the pattern of behaviour of an individual within the first year of his life than in the second. Similarly, more can be done in the second year than in the third, and in the third year than in the fourth, and so on.

Contributed by GILBERT J. RICH, Ph.D., M.D., *Director, Roanoke Guidance Center, Roanoke, Virginia.*

It is in these early years that the essential methods are built up which the individual will use throughout his life in meeting difficult situations and frustrations. The form in which they may be expressed may change under the various influences of the environment and of maturation, but the essential characteristics of the type of reaction will remain more or less fixed. Put in another form, this means that the essential motivation toward abormal behaviour is laid down early in life. The form which the abnormality takes will be a later development and whether or not it includes delinquent or criminal behaviour may often be a matter of the chance environmental factors which gave the individual an opportunity to obtain his satisfactions in one way or another.

More especially we should think about the frustrations which occur in early life. It is in the overcoming of these frustrations that we see the most important development in emotional growth. This does not mean at all that our efforts should be directed toward preventing the existence of frustrations in early life. Indeed, this would be impossible. Moreover, it would not be a desirable preparation for later life. We live in a world in which it is impossible to obtain the maximum of satisfactions. The very fact that our native and instinctive urges are in serious conflict with the demands of civilized life among other people means that frustration is inevitable. The problem is how best to prepare the child for the frustrations of life without doing harm to him.

The answer is to be found primarily in the concept of increasing tolerance for frustration. As the infant grows into the child and the child into the adolescent, his ability to withstand frustrations increases. Our great danger is that we frustrate him too greatly and too early in his life. This may, perhaps, be illustrated very simply in the matter of toilet training. Some ten or fifteen years ago it was common practice among medical men, especially pediatricians, to encourage parents to toilet train their children at ages six and twelve months. We are now seeing many of these children in our child

guidance clinics and finding that they are unusually rebellious. The frustration of the child's desire to eliminate waste products when and as he pleases was carried on at an early age when the child was too young to tolerate it. He fought it, but repressed much of the hostility in order to maintain the love and approbation of the parents. In later years, however, this hostility begins to show itself. Some of it will doubtless be transferred from the parents to society as a whole and we are already seeing some of these children engaged in delinquency and crime. Again, may I point out that not by any means all of them become delinquent. Only a few will have their hostile activity directed particularly into this channel. Here, again, the early frustration will provide the motivation but not the mechanism.

Another way of looking at this matter is to ask ourselves what are the needs of children which should be satisfied if they are to make a normal emotional development. Without attempting any real classification of these needs, may I point out those whose satisfaction seems most frequently to be neglected, and whose neglect seems most frequently to give rise to those abnormalities which are seen in clinical practice. First of all is the need of the child to be secure. Security means, above all, the love of the parents. The child needs to be wanted and to know not only that he is *a* wanted child but also he is *the* wanted child. I surely do not need to call to the attention of this group the facts of parental rejection. Yet it is evident that these facts are not at all generally accepted aside from those people who work professionally to help others adjust. We live in a culture which has put a premium upon parenthood and has made it very difficult for the average parent to acknowledge even to himself, and much more to others, that a child is rejected. The result is that few parents actually face the fact of rejection. They tend to either rationalize the rejection by seeing the child as a bad child and justifying their lack of love for him on the grounds that he is so bad that he cannot be loved even by his father or mother. Or, if they do not do this, they compensate for the rejection by an overprotective attitude which is as bad or worse than outright rejection. There are, of course, many causes for parental rejection.

The acceptance of the child by the parent is the most important factor in his obtaining th security which is so necessary for emotional development. There are many things which a parent can do which will make a child insecure. Severe punishment or scolding is not the only means of producing insecurity. Neglect will produce it, or partiality toward another child, a brother or sister. Even the comparison of one child with another makes the one who is compared unfavorably insecure. This is what I meant when I said that the child needs to be *the* wanted child, as well as *a* wanted child. Even the inclusion or noninclusion of children in affairs and councils of the family may make the difference between security and insecurity.

A second need that the child has is for accomplishment. He needs to be able to succeed in some of the things which he does. This means that those who deal with the child, be they parents, teachers, or others, must find for the youngster something which he can do and do well, even though it may be necessary to find simple activities for whos. who are not too well endowed with intelligence or with manual skills. It is in this connection that we meet with the false idea that our task in life is to prepare children for a culture which is essentially competitive in nature and that, therefore, we must at a very early stage introduce them to competition and to the fact that they will have to meet with failure. Such a point of view is unsound in two respects.

In the first place, it fails to realize that, even if the world were as competitive as the proponents of this theory maintain, the child must be introduced to competition and to failure only as quickly as he is able to tolerate it. More important, however, is the fact that we are not developing a highly competitive civilization. Quite the contrary, as our civilization progresses, human beings are becoming more and more regimented. It is becoming increasingly likely that our children will simply fit into a scheme which is arranged for them by government, labor union, employer, etc. Competition seems to be limited primarily to the few who are leaders. We are certainly not justified in sacrificing the many who will be more or less regimented followers for the sake of developing the few who will be leaders.

Finally, it is necessary to call attention to the child's need of development, that is, of growing up. By this is meant the process by which the child becomes less and less dependent upon others and more and more dependent upon himself. This is again a gradual process which begins at birth and continues until maturity. One function after another is taken over by the child and the parent or teacher is relieved of it. There are numerous blocks toward this development because of over-protection

on the part of the parents and others. Primarily, they seem to be due to the unwillingness of the older person to give up the position of being a god to the child. The satisfaction which the parent receives from being the all important individual in the child's life is one which is not readily relinquished. The continuation of controls after the time when the child should take them up for himself is readily rationalized, of course, on the basis of the child's needs, the demands of the community, etc. Essentially, the block is the parental unwillingness to release the child by helping the child develop his ability to take care of himself. It is to be noted that exactly the same thing occurs when the child's dependence shifts from parent to teacher. The teacher becomes so well satisfied with being important to the child that he is unwilling to release the child and allow him to grow up, using very much the same types of rationalization that the parent has previously used.

The importance of the family is paramount. There are several reasons for this. It is the members of the family, more particularly the parents, who are in contact with a child during the earliest years of his life, the years when his personality is most plastic. These are also the times when the child's own needs are greatest. The emotional attitudes which he develops toward the members of his family are likely to be more intense than those developed toward any other individuals later in life. Never again does he have to depend upon any persons to the same extent that he has to depend upon parents, siblings, and others. Among the family relationships, that of child to parent is the most important. This has already been discussed in some detail. The relationship of one child to another is likewise important because intense rivalries and hatreds are likely to appear. As in the case of parents, our culture places something of a premium upon brotherly and sisterly love, with the result that the child who is rivalrous of and hostile toward his sibling must find some way out of the conflict that ensues. It is unfortunate that the parents, sometimes through ignorance but more frequently because of their unconscious motivations, often increase these sibling rivalries rather than minimize them and help the child to adjust to them.

In addition to the family, we must consider the school as an important factor in determining and directing a child's development of personality. Over a considerable period of years, the school occupies a large part of a child's time. Emotionally it becomes to a certain extent the substitute for the home. The teacher becomes a substitute parent. Many of the attitudes which have developed toward the parents are transferred to the teacher and undergo further elaboration and redevelopment in the relationship of pupil to teacher.

A third factor in the adjustment of a child is to be found in his companions, that is, in the other children among whom he lives. We already know that specific patterns of behaviour may be learned from other children. These patterns may include those of delinquency, as has been brought out so well by the discovery of delinquency areas in our cities. I consider these patterns of less importance than I do the emotional reactions of children to their treatment by the others. Part of the need for security, for accomplishment and for development (growing up) is satisfied by other children. It is a rather remarkable observation in clinical practice with disturbed children to find that, despite the multiplicity of causes for which problem children are referred, the great majority of them are failing to make good social adjustments. The need for acceptance by one's companions is so great that a failure in this direction is an important motivating force in the individual's entire personality. It is, in addition, a fairly sensitive index of the child's general adjustment. Unfortunately, it is seldom seen as an evidence of maladjustment unless it results in such severe fighting as to bring complaints from the parents of the other children.

In light of these considerations, what can we say about the prevention of criminal and delinquent behaviour? Perhaps, the question could be better put by asking what we can do to prevent abnormal behaviour of any sort; or, going further, what we can do to prevent emotional maladjustment. Our whole thesis is that the essential difficulty is maladjustment. It gives rise to abnormal behaviour. Breaking the law is but one form of abnormal behaviour. I am concerned at this point not so much with what we can do to prevent the directing of those hostile impulses which arise from emotional maladjustment into delinquent and criminal channels as I am with what we can do to prevent the occurrence of these maladjustments and thereby prevent criminal behaviour at its source. The whole problem thus becomes one of general mental hygiene, for the healthily developed individual does not need to make use of antisocial behaviour in order to gain satisfactions out of life.

It would appear that the first step would be in

the direction of education. If we are to deal adequately with children, we must first of all deal adequately with their parents. We can educate parents toward better understanding of their own problems, and, secondarily, toward a better understanding of the children's problems. The latter, although more superficial, is the easier. We are now teaching our adolescent girls how to be homemakers and to give children physical care. It should certainly be possible to instruct them as to the psychological as well as the physiological nature and needs of the children they are going to bear. Education is the only weapon with which we can adequately fight our outworn traditions, such as, the need for using force and punishment as the only ways of handling and educating children, a tradition which is exemplified in the so commonly quoted adage of "Spare the rod and spoil the child". Education can help parents understand that there is much more to handling a child's life than punishing him for infractions. Such educational efforts are by no means a panacea for all the woes of parent-child relationships, too many of the difficulties are expressions of deep emotional maladjustments in the parents. We cannot cure these by education, but we can at least direct them along new pathways.

The hope of the future is in prevention. We have had so-called correctional institutions for many decades, but they have not succeeded in correcting any large percentage of their inmates, as shown by the high rates of recidivism. Would it not be better if we were to turn our attention more toward prevention? In doing this, we must bear in mind that human behaviour, like other natural phenomena, shows the inter-relationship of cause and effect. But cause and effect may be very dissimilar. The cause may not resemble the effect in any way. If we are to do anything by way of prevention, we must look far and wide for the causes and then try to eradicate them. We will not thereby have a panacea. We will not be able to prevent every criminal or delinquent act, but at least we will be able to minimize these because we will find developing in our communities increasingly fewer children who are so hostile to the world that they have to take refuge in law-breaking activities.

Toward Salaried Practice

A desire for security and a desire to be part of a medical team are mainly responsible for the present trend toward salaried medical practice. That's the consensus of some fifty medical leaders queried by *Medical Economics*. Their views are reported in the magazine's February issue.

Nearly all these medical leaders (less than half of whom are themselves on salary) "explain the rise of salaried practice in terms of doctors' attitudes." "To quote a privately practicing surgeon who's out of sympathy with the trend, 'today's young M.D. wants security. He wants leisure. And, unlike the doctor of the past, he isn't willing to work for these things. He wants to start out with them. So he takes a salaried post.' "

Adds the medical director of a big closed-panel plan: "Many of our best young men feel they can serve most effectively in teaching hospitals or in teamwork with salaried groups. Sure, they want security. But even more they want a better professional life."

"Besides these attitudes among doctors themselves, there appear to be at least five outside factors pushing them toward salaried practice." "First, of course, is organized labor," the magazine reports. Some of the medical leaders it queried pointed out that more and more unions are willing to pay big money for their own medical programs. Says the head of one labor health center: "The time is already at hand when the family doctor in some industrial areas makes a better living on a union salary than in solo practice."

Another factor accounting for the spread of salaried practice lies in the increased number and influence of "private teaching [hospitals] with salaried staffs."

"The third outside factor is the great upsurge in medical research." "Today's research-minded doctor is likely to be on the full-time payroll of a foundation, a university, or a drug company.

"Fourth is industrial medicine," *Medical Economics* reports. It quotes the medical director of one doctor-employing company as saying, "There are more than 3,500 physicians on full-time salaries right now. Give us another ten years and we'll be one of the top five specialties."

"Finally, the Federal tax laws are a powerful force in favor of salaried practice." They take so much of what the high-paid private practitioner earns that many physicians say they would rather work on salary. Salaried jobs, they add, often provide for company pensions, thus eliminating doctors' worries about savings.

Pre-Paid Medical Care....

Edited by
RICHARD J. ACKART, M.D.

Blue Shield Fees and Income Limits

The two Blue Shield Plans of Virginia were originally conceived by their respective sponsors as planned services for the public good. The Plans were not established to forestall "socialized medicine"—that they have successfully done so, however, can be considered an eminently worthwhile by-product of their operations; they were established to serve the people of the State, most especially to serve people of moderate means. Had the Plans been organized by doctors primarily for their own benefit, payment of indemnities would have been adopted as the modus operandi; because doctors organized the Plans primarily for the benefit of their patients, provision for service benefits has always been the operational pattern of both Plans.

The two Plans, however, while developing their service programs and tailoring details to fit their respective situations, became somewhat different, not as concerns fundamental Blue Shield concepts but as concerns scope of services provided for, limitations to services, and procedural characteristics. For one thing, the Blue Shield Plan with headquarters in Richmond adopted income-criteria with which to define a subscriber's eligibility for a Participating Physician's "full-service". The Richmond Plan then devised fee schedules that would be commensurate with these income-criteria.

The relationship between the Richmond Plan's fees and its income-limitations to "full-service" is too often overlooked. That relationship, however, is fundamental to the Plan's operations and should be recognized by every physician who is practicing in the 72 county area served by that Plan. Physicians should understand that the fees scheduled for the Standard Contract are based on the ability to pay of families with incomes of less than $4,000; the fees scheduled for the Comprehensive Contract are based on the ability to pay of families with incomes of less than $6,000.

For example, the Richmond Plan's Standard Contract stipulates a total family income of $4,000 as the limitation to eligibility for "full-service"; the Blue Shield fees payable under the Standard Contract, accordingly, are in amounts that can be afforded by people whose total family incomes are *less than $4,000.* Because $4,000 is the top-limit to eligibility for full-service benefits under the Standard Contract, it follows that the *average income* of eligible families must be *appreciably less than $4,000.* Even with the budgetary help of prepayment, these families can not afford to pay large fees, nor the amounts which, in some communities, are average fees.

Just as "What goes up must come down", it is axiomatic in prepayment plan operations that what is paid out must first be paid in. The Blue Shield fees paid under the Standard Contract must be prepaid by people whose family incomes are less than $4,000. How much can these people afford to pay for health care? Is it feasible to increase the subscriber rates paid by these people so that the Standard Contract fees can be increased? Could these people, without Blue Shield membership, pay larger fees than those currently listed in the Standard Contract Fee Schedule?

To answer these questions, Richmond Plan executives consulted officials of two well-known banks, an officer of a reputable finance company, and a social worker of the Family Service Society to get assistance in constructing a practical budget for a man, wife, and two children who are trying to live within an income of $325 a month, $3,900 a year. The following is a composite of the suggestions offered:

Item	Per Month	Annual Expense
U. S. Income Tax	$ 18.75	$ 225.00
State Income and Personal Property Taxes	3.75	45.00
Food	105.00	1,260.00
Housing	55.25	663.00
Clothing	36.25	435.00
House Operations Fuel, Utilities, Equipment, Furn.	30.00	360.00
Transportation	25.00	300.00
Health Care	10.00	120.00
Church, Contributions, Gifts, Dues	10.00	120.00
Children's Incidentals	7.50	90.00
Personal Care	7.00	84.00

Recreation, Tobacco, Liquor, Vacation	7.00	84.00
Life Insurance	6.00	72.00
Miscellaneous	3.50	42.00
Total	$325.00	$3,900.00

Blue Cross-Blue Shield membership dues for the Standard Contracts amount to either $91.20 or $105.60 a year, depending upon whether the family is enrolled through a Group or is on a non-Group, pay-direct basis. Thus, there remains $28.80, maybe only $14.40, of this family's annual health budget to cover the costs of preventive medical care, office and home care of illness, dental care, dietary supplements, and drugs. Expenses above these amounts can be met only by some sacrifice which this family should not be called upon to make.

The answers seem quite obvious: This family does not appear able to pay professional fees larger than those currently listed in the Standard Fee Schedule, either through Blue Shield's prepayment plan or, without Blue Shield, out of the limited family pocket-book. Probably this $3,900 a year family, without its Blue Shield membership, would have no funds on hand with which to pay any professional fee for in-hospital care.

Though a seeming paradox, it is a fact that the economic changes of recent years have increased, rather than decreased, the relative value of the Standard fees—have made them more adequate as compensation for professional services to under-$4,000 families. While the general economy has increased, the $4,000 limitation to "full-service" imposed by the Standard Contract has remained constant, but today $4,000 will not stretch nearly so far as the same amount would go just a few years back. Because basic living costs have gone up appreciably, families whose incomes are still under $4,000 despite the higher level of the general economy now have less left over with which to pay professional fees. The Blue Shield fees which are paid in their behalf are therefore relatively more adequate today than formerly.

What the patient could afford to pay out of his own pocket—what the doctor would charge and collect if the patient were paying out of his own pocket; these are the criteria of adequacy of Blue Shield fees. The physician should remember that the Blue Shield fee he receives directly from the Plan need be considered payment-in-full only when his subscriber-patient has an income within the stipulated limits to "full-service". Whenever the patient's income is above those limits, the physician collects any amount he deems proper, and the Plan helps him do so by paying the Blue Shield fee as an indemnity.

Within the Standard Contract Fee Schedule there are still a few uncorrected inconsistencies in the relationships between fees—sporadic instances of fees seeming to be out-of-line. Throughout 1957 Richmond Plan trustees will be meeting with official representatives of each specialty society to obtain help in eliminating these few inconsistencies; also during 1957 the Plan's staff will exert every effort to replace Standard Contracts with Comprehensive Contracts in all instances where the $4,000 family income limit to "full-service" and the commensurate fees of the Standard Contract are inappropriate. By promoting these activities physicians can help "The Doctors' Plan" be of more value to themselves, and by doing so they will help the Plan be of more service to their patients.

Women Studying Medicine

The American Medical Association reports that during the academic year 1955-56 a total of 1,573 women were studying medicine in the 76 approved four-year medical schools in the United States. This is a 2.3 per cent gain over the previous year.

The Woman's Medical College of Pennsylvania had the highest enrollment of any school—182. The medical schools of Columbia University and State University of New York, New York, each enrolled 40 or more women.

Woman's Auxiliary . . . .

President ..... Mrs. Lee S. Liggan, Irvington
President-Elect ..... Mrs. John R. St. George, Portsmouth
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Northampton-Accomac.

This Auxiliary held its meeting on January 17th at the home of Mrs. W. J. Sturgis, Sr., with nineteen members present. A delicious luncheon and social hour preceded the business meeting. Mrs. S. K. Eskridge, president, anounced that Mrs. Lee S. Liggan, State President, and Mrs. J. R. St. George, President-Elect, will be guests of the Auxiliary at the April meeting which is to be held at the home of Mrs. Raymond K. Brown. Plans were discussed for Doctor's Day.

CATHERINE R. TROWER,
Chairman, Press and Publicity

Mid-Tidewater.

The Auxiliay to the Mid-Tidewater Medical Society met in the home of Mrs. Malcolm Harris, West Point, on January 22nd. The president, Mrs. Raymond Brown, presided. After a brief business meeting, Dr. Shirley Carter, Richmond, gave a most interesting talk on "Her Experiences as a Woman Doctor". The Auxiliary members joined the doctors at the Country Club for dinner.

Richmond.

The Auxiliary to the Richmond Academy of Medicine sponsored a play, "Hayfever" on January 31 through February 2nd at the Mary Munford School. This was produced by the Richmond Drama Workshop. Mrs. William Moncure and Mrs. Heth Owen served as General Chairmen, with Mrs. Custis Coleman, Mrs. Campbell Harris, Mrs. Beverley Jones, Mrs. Bernard D. Packer, Mrs. George K. Brooks, Jr., Mrs. Thomas F. Walker, Mrs. George Snead, and Mrs. I. S. Zfass as members of the committee.

This play was presented for the benefit of Sheltering Arms Hospital which is the philanthropic project for the Auxiliary. They give particular emphasis to the medical surgical equipment and last year donated new anesthesia apparatus for both the pediatric and general surgical needs. They now hope to be able to purchase a new autoclav as the old one is antiquated and can no longer be repaired.

At the meeting of the Auxiliary on January 18th, Mrs. Lee S. Liggan, State President, was the speaker.

Southern Medical Association

The Thirty-Second Annual Convention of the Woman's Auxiliary to the Southern Medical Association was held in Washington, D. C. in November. Virginia was represented by Mrs. Lee S. Liggan, President; Mrs. Maynard R. Emlaw, Past-President of Virginia and Past-Treasurer and Past-Vice President of Southern, who was serving on the Doctor's Day Awards Committee; and the Councilor, Mrs. Kalford W. Howard.

The program was interesting, beginning with a Pre-Convention Breakfast Meeting of the Board on the morning of November 12th. That afternoon there was a lovely Tea and Fashion Show, put on by Garfinkle's, and a General Assembly of the Medical Association was the evening program.

On Tuesday morning the General Session of the Auxiliary was held, with Mrs. John J. O'Connell presiding. Mrs. O'Connell will be remembered among our members because of her smile and her charm when she visited us at the Roanoke Convention last fall. Especially stressed at this meeting was the hope that all county auxiliaries in the Southern States will observe Doctor's Day this year, and that in all publicity the date, March 30th, will be mentioned and emphasized. This is to be done with the hope that in time that date will be universally observed to honor doctors.

At the close of the meeting, the following officers were elected and installed: Mrs. Oscar W. Robinson of Paris, Tex., President; Mrs. Walker L. Curtis of College Park, Ga., President-Elect; Mrs. George Owen of Jackson, Miss., First Vice President; Mrs. Harry L. Johnson of Elkins, N. C., Second Vice-President; Mrs. F. A. Holden of Baltimore, Md., Third Vice-President; Mrs. William Garrott of Cleveland, Tenn., Recording Secretary; Mrs. John D. Gleckler of Denison, Tex., Corresponding Secretary; Mrs. Kalford W. Howard of Portsmouth, Treasurer. Mrs. Maynard R. Emlaw

was named Chairman of the Memorial Committee. The new Councilor from Virginia, to serve the next two years, is Mrs. Walter A. Porter of Hillsville.

A beautiful luncheon followed the General Session, at which the awards were given for the best observance and display of Doctor's Day, after which the visiting ladies were entertained with a tour of the City of Washington.

The concluding gathering of the Convention was the Post-Convention Board Meeting on Wednesday morning, presided over by the new President, Mrs. Robinson, at which plans for the ensuing year were made. Those of us who have met Mrs. Robinson will be looking forward to her visit to us in October, when we will be meeting again in Washington.

MARGARET P. HOWARD, *Past Councilor*

Chewing Tobacco's Effect on Body

Heart researchers have provided some new information for doctors wishing to advise their patients about the effects of chewing tobacco on the circulatory system.

Although 81 million pounds of chewing tobacco are consumed annually in the United States, practically nothing is known about its effect on the body. However, four Cincinnati researchers now have conducted a series of tests on men who habitually chewed tobacco. They reported their findings in the February 2 Journal of the American Medical Association.

They found that chewing tobacco produced changes in the body similar to those caused by smoking cigarettes, including increases in pulse rate and blood pressure and a decrease in skin temperature. It also produced changes in the ballistocardiograph, which measures the impact on the body of the heart's thrust as it pumps blood. Smoking did not produce ballistocardiograph changes.

The 24 men, ranging in age from 34 to 71 years, chewed low-nicotine tobacco or a regular commercial brand. Some also chewed gum for comparison.

After chewing commercial tobacco, the pulse rates of 14 men increased markedly, with an average increase of 13.4 beats a minute. With low-nicotine tobacco, the rate remained constant in three men, decreased in one and increased by an average of 6.5 beats a minute in nine men. After chewing gum one man showed a slight rise and one a slight fall. All showed definite increases in blood pressure after chewing commercial tobacco.

In most of the men the pattern of skin temperature changes was similar to that reported in cigarette smoking studies. Forehead temperatures remained nearly constant with both types of tobacco and gum, but temperatures in the fingers and toes decreased after chewing tobacco.

The ballistocardiograph changes, which were recorded in 23 men, were the greatest about 15 minutes after chewing began. Younger men who smoked in other studies did not show such changes. The possibility that more nicotine is absorbed by the body during chewing than during smoking might explain these changes in the older men.

The average amount of tobacco chewed contained about 10 times more tobacco than the standard cigarette. In addition, the tobacco was held in the mouth longer than cigarette smoke usually is. It is estimated that more than two-thirds of the nicotine in cigarette smoke is absorbed through the membranes of the mouth.

Conducting the research, which was supported by a grant from the Tobacco Industry Research Committee, New York, were Dr. David L. Simon, Dr. Arnold Iglauer, Dr. John Braunstein and Robert E. Rakel of Cincinnati General Hospital and Kettering Laboratory, University of Cincinnati.

Miscellaneous . . . .

Responsibilties of Medical Profession in Use of X-rays and Other Ionizing Radiation.

1. The United Nations General Assembly, being aware of the problems in public health that are created by the development of atomic energy, established a Scientific Committee on the Effects of Atomic Radiation. This Committee has considered that one of its most urgent tasks was to collect as much information as possible on the amount of radiation to which man is exposed today, and on the effects of this radiation. Since it has become evident that radiation due to diagnostic radiology and to radio-therapy constitutes a substantial proportion of the total radiation received by the human race, the Committee considers it desirable to draw attention to information that has been obtained on this subject.

2. Modern medicine has contributed to the control of many diseases and has substantially prolonged the span of human life. These results have depended in part on the use of radiation in the detection, diagnosis and treatment of disease. There are, however, few examples of scientific progress that are not attended by some disadvantages, however slight. It is desirable therefore to review objectively the possible present or future consequences of increased irradiation of populations which result from these medical applications of radiation.

3. It is now accepted that the irradiation of human beings, and particularly of their germinal tissues, has certain undesirable effects. While many of the somatic effects of radiation may be reversible, germinal irradiation normally has an irreversible and therefore cumulative effect. Any irradiation of the germinal tissues, however slight, thus involves genetic damage which may be small but is nevertheless real. For somatic effects there may however be thresholds for any irreversible effects, although if so these thresholds may well be low.

4. The information so far available indicates that the human race is subjected to natural radiation,[1] as well as to artificial radiation due to its medical applications, to atomic industry and its effluents and to the radioactive fall-out from nuclear explosions. The Committee is aware of the potential hazards that such radiation involves, and it is collecting and examining information on these subjects.

5. The amount of radiation received by the population for medical purposes is now, in certain countries, the main source of artificial radiation and is probably about equal to that from all natural sources. Moreover, since it is given on medical advice, the medical profession exercises responsibility in its use.

6. The Committee appreciates fully the importance and value of the correct medical use of radiation, both the diagnosis of a large number of conditions, in the treatment of many such diseases as cancer, in the early mass detection of conditions such as pulmonary tuberculosis, and in the extension of medical knowledge.

7. Moreover, it appreciates fully the contributions of the radiological profession, through the International Commission on Radiological Protection[2] in recommending maximum permissible levels of irradiation. As regards those whose occupation exposes them to radiation, the establishment of these levels depends on the view that there are doses which, according to present knowledge, do not cause any appreciable body injury in the irradiated individual; and also on the consideration that the number of people concerned is sufficiently small for the genetic repercussions upon the population as a whole to be slight. Whenever exposure of the whole population is involved, however, it is considered prudent to limit the dose of radiation received by germinal tissue from all artificial sources to an amount of the order of that received from the natural background radiation.

8. It appears most important therefore that medical irradiations of any form should be restricted to those which are of value and importance, either in investigation or in treatment, so that the irradiation of the population may be minimized without any impairment of the efficient medical use of radiation.

Statement by the United Nations Scientific Committee on the Effects of Atomic Radiation.

[1] The radiation due to natural sources has been estimated to cause between 70 and 170 millirem of irradiation to the gonads per annum in most parts of certain countries in which it has been studied, although higher values are found locally in some areas. See the reports "The hazards to man of nuclear and allied radiations" published by the United Kingdom Medical Research Council in June 1956, in which also the millirem is defined; and from information submitted to the Committee.

[2] See the report of the International Commission on Radiological Protection (published in the British Journal of Radiology—Supp. 6, of December 1954—in the *Journal francais d'electro-radiologie*—No. 10, of October 1955—etc. and revised in 1956).

9. The Committee is consequently anxious to receive information through appropriate governmental channels as to the methods and the extent by which such economy in the medical use of radiation can be achieved, both by avoiding examinations which are not clearly indicated and by decreasing the exposure to radiation during examinations, particularly if the gonads, or the foetus during pregnancy lie in the direct beam of radiation. It seeks, in particular, to obtain information as to the reduction in radiation of the population which might be achieved by improvements in instrument design by fuller training of personnel, by local shielding of the gonads, by choosing appropriately between radiography and fluoroscopy, and by better administrative arrangements to avoid any necessary repetition of identical examinations.

10. The Committee also seeks the co-operation of the medical profession to make possible an estimate of the total radiation received by the germinal tissue of the population before and during the child-bearing age. It considers it to be essential that standardized methods of measurement, of types at present available, should be widely used to obtain this information and it emphasizes the value of adequate records, maintained by those using radiation medically, by the dental profession, and by the responsible organizations in allowing such radiation exposure to be evaluated. The Committee is convinced that information of this type will make it possible to decrease the total medical irradiation of the population while preserving and increasing the true value of the medical uses of radiation.

Injections for Low Back Pain

Much low back pain, sciatica and referred pain in the lower extremities can now be eliminated by a very simple treatment: injections of vegetable oil and an anesthetic. Dr. George S. Hackett, Canton, Ohio, developed the treatment and has used it for the last 14 years. He said in the January 19 Journal of the American Medical Association that 82 per cent of 1,178 patients treated with the injections "consider themselves cured."

Dr. Hackett's injection treatment causes new cells to be produced in bone and fiber tissue at joints where the pain originates. It is based on his belief that relaxation of the ligaments which "weld" these joints is the cause of more low back pain and referred pain than any other factor. When a ligament is relaxed, normal tension or movement stretches the fibers. This overstimulates the sensory nerves because they do not stretch. Thus pain is produced either at the site (called "trigger-point pain") or in some other part of the body (referred pain).

The diagnosis that pain is the result of ligament relaxation can be verified by "needling" with a local anesthetic solution. The point of the needle is inserted within the disabled ligament. The irritation produced by the needle together with the pressure of the solution will immediately produce the local pain and frequently the referred pain, both of which will disappear promptly as anesthesia takes place.

Treatment consists of making the ligaments and bone grow new tissue in the "weld" between the ligament and bone. This treatment is called "prolotherapy," which means stimulating production of new cells to rehabilitate an incomplete structure. A solution which causes the stimulation in the bone and fibrous tissue is injected into the relaxed ligament at its junction with the bone.

Treatment by as many as six injections is usually given in the doctor's office, but more incapacitated patients are treated in the hospital, where as many as 20 injections can be given in one day while the patient is anesthetized. It usually takes a month for the production of new cells. Patients report for evaluation at the end of six weeks. They themselves know when they are cured.

Editorial . . . .

Richmond's War Memorial

PRIOR TO THE DESIGNATION of the Richmond Memorial Hospital as Richmond's memorial to those killed in World War II, the objection was raised by some that a memorial of this type should not be a utilitarian structure.

The statement was made that Richmond hospitals rapidly outgrew their setting and this would mean that in the course of a few decades, at most, the building would be discarded and the memorial would cease to exist. This objection was overcome when Laburnum, the Bryan homeplace, and the surrounding fourteen acres were given to the hospital by David Tennant Bryan. This broad tract insures permanence by providing unlimited possibilities for growth in the foreseeable future.



A second and more disturbing objection was occasionally heard to the effect that a utilitarian memorial would lend itself to exploitation and could easily degenerate into a commercial project entirely unworthy of its high purpose. It is to be hoped that all who had this misgiving found it possible to attend the dedication of the hospital on January 13. No one among the ten thousand who were present for this impressive ceremony could have failed to realize the lasting and appropriate nature of this memorial.

The heart of the hospital is found in the chapel. This rises for five stories above the altar, which contains the Book of Memory. This illuminated volume required five

years to prepare and has the names of three of Richmond's war victims inscribed on each page. Each morning a page is turned, so that the name of all of Richmond's dead will be exposed for one day each year.

Behind the altar and extending the full height of the south wall of the chapel is a vast expanse of green Swedish marble on which is inscribed the names of 984 men and women, who lived in the City of Richmond or Chesterfield or Henrico Counties before they entered the service. Each name is separated from its companion by a gold star. The altar is flanked by huge United States and Virginia State flags. The following inscription, attributed to Franklin D. Roosevelt, encircles three sides of the chapel:

"They stand in the unbroken line of patriots who have dared to die that freedom might live and grow and increase its blessings. Freedom lives and through it they live — in a way that humbles the undertakings of most men."

The chapel, its altar and the tablet may be seen through bronze trimmed windows from each of the first five floors of the hospital. Access to the chapel is provided by twin sets of marble stairs from the lobby.

Rarely since the opening of the hospital has there not been at least one person eagerly scanning the gold encrusted names on the wall of the chapel or pausing to see who in the Book of Memory has been chosen for especial honor that day. The Richmond Memorial Hospital is a living memorial which not only furnishes healing for the sick of Richmond and Virginia but also provides solace to those who have lost kinsmen and friends in the defense of our country. What could be a more appropriate memorial?

H.J.W.

Physick at Jamestowne

THE TREADMILL of modern-day life permits little time for thoughtful reflection and appreciation of the contributions toward our well-being made by our forefathers. The forthcoming Jamestown Anniversary Festival will demand a pause and afford opportunity to contrast present conveniences with the hardships of life in 17th century Virginia.

Of particular interest to the members of The Medical Society of Virginia will be the Exhibit on Colonial Medicine to be housed in the Richmond Academy of Medicine Building from April to September. Our society is fortunate in having a member so eminently qualified to plan and direct this endeavor as Dr. Wyndham B. Blanton, physician, historian, writer, editor, professor, the recognized authority on Colonial Medicine in Virginia.

Among the more critical viewers of this Exhibit will be the members of the American Association of the History of Medicine. This elite organization meets in Richmond and Williamsburg in May of this year. To satisfy the searching glances of these visitors, not only must the drugs, instruments, and medical procedures be contemporaneous but also the dress, furniture, furnishings, and food must be appropriate.

The prospectus of the exhibit includes a typical sick room of the period, a physician's work room, and an Indian collection. There will be a display of environment factors of life at Jamestown. This will include mortality and survival statistics, public health measures and illustrations of the diet of the time. The auxiliary aids to medicine will also be shown. These will include such subjects as pharmacy, midwifery, nursing, dental procedures and housing for the sick.

No member of the Society should fail to take his family to the Festival at Jamestown this summer, but the trip should include a stopover in Richmond for a glimpse of physick as practiced at Jamestown.

ENNION S. WILLIAMS.

Society Proceedings . . . .

Richmond Academy of Medicine.

Officers of the Academy for 1957 are: President, Dr. Elam C. Toone, Jr.; president-elect, Dr. Webster P. Barnes; vice-presidents, Drs. J. B. Stone and W. D. Suggs; recording secretary, Dr. Stuart Ragland; and sergeant-at-arms, Dr. John Williams Powell. Dr. W. Linwood Ball is chairman of the Board of Trustees, and Drs. M. M. Pinckney, D. D. Talley, III, and William Young are members.

Warwick-Newport News Medical Society.

The regular dinner meeting of this Society was held at the James River Country Club on February 12th. The guest speaker was Dr. James Brooks, Department of Thoracic Surgery, Medical College of Virginia. His subject was Emergencies in Thoracic Surgery.

Dr. F. S. Beaslie, Jr., Newport News, is president of this Society, and Dr. S. H. Mirmelstein, secretary-treasurer.

Northampton County Medical Society.

At a meeting of this Society held in Eastville on January 24th, the following officers were elected: President, Dr. H. L. Denoon, Jr., Nassawadox; vice-president, Dr. J. E. Gladstone, Exmore; and secretary-treasurer, Dr. J. R. Freeman, Cape Charles.

Various matters of interest were discussed after the supper meeting. Among these was the good work of the Bi-County Health Council under the presidency of Dr. J. R. Hamilton during the past year. The next meeting of the Health Council will be on March 18th at the Accomac Health Center. Mr. Henry K. Arneson, executive secretary of President Eisenhower's Committee on Migratory Labor, will be the speaker.

Accomack County Medical Society.

At a meeting of this Society on December 12th, Dr. John W. Robertson presented facts and figures on Social Security as applied to physicians. He moved that the Society go on record as favoring this program, which was adopted.

Election of officers for 1957 resulted as follows: President, Dr. J. Fred Edmonds, Accomac; vice-president, Dr. J. L. DeCormis, Accomac; and secretary-treasurer, Dr. James C. Doughty, Onancock, re-elected for the eighteenth consecutive year.

Dr. Robert Richards, Lt. M.C., U. S. Navy Air Force, gave a lecture on Aviation Medicine.

Fourth District Medical Society.

At the annual meeting of this Society held in Petersburg on December 11th, the folowing officers for 1957 were elected: President, Dr. James Thweatt, Petersburg; vice-presidents, Dr. Ray Moore, Jr., Farmville and Dr. R. C. Allison, Emporia; secretary-treasurer, Dr. Clyde Vick, Jr., Petersburg; and chairman of steering committee, Dr. Robert Keeling, South Hill.

Arlington.

The Annual Joint Dinner Meeting of the Arlington County Medical Society and the Arlington County Bar Association was held on January 23 at the Washington Golf and Country Club. The meeting was attended by more than 150 physicians, lawyers and guests. The highlight of the evening was a mock trial entitled "The Commonwealth of Ireland vs. William Chadwick", which provided much entertainment, while at the same time dealing with several medico-legal problems in the interpretation and admissability of drunkenness tests. Those participating in the "Mock trial" included Drs. Stephen J. Sheehy, William Dolan and Desmond O'Doherty and Lawyers Iverson Almand, Thomas Dodge, David Kenny, William Hassan, Oren Lewis, Paul Varoutsos and William Chadwick.

The Committee in charge of the dinner consisted of Messrs. James Simmonds, Oren Lewis and David Kenny of the Bar Association and Drs. John Alexander, Stephen Sheehy and William Dolan of the medical society.

Hampton Roads Academy of General Practice.

An organizational meeting of the Academy, which is composed of doctors on the Lower Peninsula, was held on January 29th. Dr. N. D. Nelms, Hampton, is president; Dr. S. H. Mirmelstein, Newport News, vice-president; and Dr. W. M. Goldsmith, Hampton, secretary-treasurer.

Current Currents

A SPECIAL COMMITTEE of the Virginia Advisory Legislative Council is now conducting a study of Virginia statutes pertaining to the handling and dispensing of drugs. It is particularly interested in determining which statutes are old, obsolete or contradictory.

The Committee is most anxious to have your thoughts and suggestions concerning current methods of prescribing and dispensing drugs, including over-the-counter sales and other practices. Your comments will greatly assist the Committee in its effort to bring our statutes up-to-date.

Please send your thoughts and observations to Society Headquarters or to Dr. James L. Hamner, Mannboro.

THIS IS THE TIME to write your member of Congress and let him know your thoughts on current legislation. When you write, however, do it right. The following ten points are suggested as a guide by the U. S. Chamber of Commerce:

1. He should be addressed as Representative John Doe, or Senator John Doe—not Mister.
2. Be brief, but not terse.
3. Be specific, positive—don't hedge.
4. Give him the *local* viewpoint—how the national issue would affect your *community*, your *profession*.
5. Letters should be dignified.
6. And reasonable—don't ask the impossible.
7. But request action—your Congressman was elected to *do* something.
8. Make it your letter—on your own letterhead, in your style.
9. Request an answer—you've told him where you stand, now ask him where *he* stands.
10. Be appreciative—thank him for good things he does.

MUCH FOOD FOR THOUGHT is contained in a recent statement by Dr. Basil MacLean, President of the Blue Cross Association. Dr. MacLean, warning of "bureaucratic medicine", estimated that 30 million Americans either already depend on the United States for all or part of their medical care, or have the privilege of doing so.

FORMER PRESIDENT HOOVER recently stated that "The American people must realize that they cannot have every social and public works improvement of their dreams all at once, especially in a world where we have to defend ourselves from a monstrous international danger."

MEMBERS of The Medical Society of Virginia will be interested in an organization gaining prominence in weight losing circles. The organization is "TOPS", which stands for "take off pounds sensibly". Its program is based on the principle of "group therapy", getting together a group of people who have a problem in common and discussing it frankly without fear of being laughed at or misunderstood.

According to Dr. William Bolton, Associate Editor of *Today's Health*, "TOPS" is of interest to the medical profession because of its espousal of two basic principles—that weight reduction can be carried out most satisfactorily through consultation with one's physician, and that "fads" have no place in any weight reduction program.

"TOPS" is anxious to organize clubs in Virginia. Physicians interested in learning more about the organization should write Miss Edna Krasnow, "TOPS" Virginia Supervisor, 3114 California Avenue, Chicago.

WHAT WOULD YOU DO if you were president of the AMA? Five hundred individual physicians were recently questioned in this regard, and their answers are most interesting.

About one physician in five thinks AMA should get closer to individual physicians, perhaps pool their ideas on important subjects to get a more accurate indication of their feelings. A smaller percentage thinks there should be a greater representation of young doctors within the Association.

Improve public relations and public information was the second important change suggested. Concentration upon these areas was called for by fourteen per cent of the physicians.

Nine per cent cite social security or pensions for physicians. One out of twenty requests liberalized hospital affiliation requirements and about the same number suggest higher standards for practice. Approximately five per cent say improvements ought to be made in the Journal of the AMA. Others call for more opposition to government medicine and elimination of fee splitting. Increased postgraduate training is also suggested.

One doctor in ten says the Association needs no improvements.

THE AMERICAN MEDICAL EDUCATION FOUNDATION has made its annual distribution of grants to the country's 83 medical schools. This year's grants totaled $1,072,727. In addition to funds earmarked for particular schools, each four year school received $6,850 and each two year school received half that amount.

Grants from the National Fund for Medical Education have also been made.

The University of Virginia Department of Medicine received $15,392.50 from the Foundation and $34,175.00 from the National Fund. The Medical College of Virginia received $9,283.00 from the Foundation and $38,660.00 from the National Fund.

SUPPORT THE AMEF DURING 1957

News Notes . . . .

Calendar of Coming Events

American Medical Association—12th National Conference on Rural Health—Brown Hotel, Louisville, Kentucky—March 7-9.

American College of Surgeons—Sectional Meeting—The Sheraton-Park Hotel, Washington, D. C.—March 18-21.

American Academy of General Practice—1957 Annual Scientific Assembly—Kiel Auditorium, St. Louis, Missouri—March 25-28.

National Society for the Prevention of Blindness—Annual Conference—Hotel Statler, New York City, N. Y.—April 7-10.

American College of Physicians—38th Annual Session—Boston, Massachusetts—April 8-12.

The Virginia Dental Association—Annual Meeting—Cavalier Hotel, Virginia Beach, Virginia—April 29-30—May 1.

American Trudeau Society—52nd Annual Meeting—Kansas City, Missouri—May 6-9.

Virginia Academy of General Practice—7th Annual Scientific Assembly—Hotel Roanoke, Roanoke, Virginia—May 24-26.

American Medical Association—Annual Meeting—Waldorf-Astoria Hotel—New York City, New York—June 3-7.

The Medical Society of Virginia—Annual Meeting—Hotel Shoreham, Washington, D. C.—October 27-30.

New Members.

Since the list published in the February issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Katherine Patricia McGinnes Andrews, M.D., Charlottesville
Baxter Israel Bell, M.D., Williamsburg
Robert Sydney Cunningham, M.D., Bon Air
William Latane Flanagan, M.D., Christiansburg
Robert Finley Gayle, III, M.D., Richmond
Roy Stuart Gillinson, M.D., Alexandria
Louis Joseph Maciulla, M.D., Washington, D. C.
William Robert Parks, M.D., Roanoke
Bettye Sue Corpening Schurter, M.D., Galax
David English Smith, M.D., Charlottesville
Garrett Michael Swain, M.D., Arlington

Annual Spring Clinic.

The Norfolk County Medical Society Annual Spring Clinic will be held on March 27th at the Center Theater. Registration begins at 9:00 A.M. The program is as follows:

Pediatric—Present Day Immunization—Captain John Shaul, MC., USN., Benmoreel Clinic; Diseases of the Thyroid—A Symposium and Panel Discussion—Dr. Joseph D. Lea, Moderator, and Drs. Charles E. Davis, Jr., John Foster, Robert B. Gahagan, and Arnold J. Rawson; Dermatology—Treatment of Cancer and Pre-Cancerous Changes of the Skin—Dr. Asher A. Friedman; Internal Medicine—Fluid and Electrotype Problems in Heart Disease—Dr. Julian Beckwith, University of Virginia, Charlottesville; Obstetrics—Problems in Early Diagnosis of Ectopic Pregnancy—Dr. James M. Wolcott, Jr.; Gynecology—Amenorrhea, Its Diagnosis and Treatment—Dr. Howard W. Jones, Jr., The Johns Hopkins Univerrity School of Medicine, Baltimore; Urology—Dr. John H. Hill; and Oncology and Surgery—Modern Management of Breast Cancer—Dr. Edward F. Lewison, The John Hopkins University School of Medicine, Baltimore.

A cocktail party and dinner will be held at the Norfolk Yacht and Country Club. Dr. Wyndham B. Blanton, Richmond, will speak on "Some Virginia Priorities."

This Clinic has been accepted by the American Academy of General Practice for five and one-half hours of credit, Category I.

Dr. Cutler Retires.

Dr. John Calvin Cutler, a general practitioner in Newport News for forty years and one of the two

oldest practicing physicians in the State, has taken down his shingle and retired from active practice. Dr. Cutler, who is nearing 90 years of age, is a native of Cutlerville, Michigan, and practiced for 15 years in that State. His health broke down and seeking a warmer climate, he bought a farm in James City County, treating a few patients but mostly relaxing. During the flu epidemic of 1917, his friends insisted he come to Newport News for practice and he and his little black bag are now a legend of that City. Dr. Cutler made his decision to retire after a bout with pneumonia in December and he thinks "It's time to quit and let the younger men take over."

Northern Virginia Clinical Assembly.

The Alexandria, Arlington and Fairfax County Medical Societies cordially invite all physicians in Virginia to attend the eighth annual Assembly on Sunday, April 7th, from 9:00 A.M. to 5:00 P.M. in the Wakefield High School, Arlington.

The program is being presented by members of the faculty of Duke University, and is as follows: Ephinephrin and Norepinephrin by Dr. Eugene A. Stead; Dysmenorrhea, a Symptom not a Disease by Dr. Robert N. Creadick, Jr.; The Surgical Treatment of Duodenal Ulcer by Dr. Keith S. Grimson; Office Management of the Allergic Patient by Dr. Susan C. Dees; The Treatment of External Otitis by Dr. Ralph A. Arnold. Round table informal discussion sections will be on Low Fat Cookery by Mrs. Eugene A. Stead; Psychosomatic Gynecology by Dr. Creadick; Surgery of the Autonomic System by Dr. Grimson; and Pediatric Allergy by Dr. Dees. A Grand Round will be the presentation of a patient with heart disease and pregnancy with discussion by Drs. Stead and Creadick.

There is a registration fee of $5.00 which includes the luncheon and cocktail party. There is no charge for attendance of wives at the lectures or the cocktail party but they will be charged $3.00 for the luncheon. Checks for advance registration should be made out to the Northern Virginia Clinical Assembly and mailed to P. O. Box 192, Alexandria.

Dr. Clyde Dougherty

Has been elected chairman of the Hopewell Chapter of the American Cancer Society.

Dr. T. H. Dickerson,

Martinsville, has been named a member of a Mayor's Commission on Human Values. This is a five-member commission for social and civic improvements needed in Martinsville.

Medico-Legal Workshop

The Department of Legal Medicine of the Medical College of Virginia, the Chief Medical Examiner's Office and the Virginia Society of Pathology and Laboratory Medicine are sponsoring a Medico-Legal Workshop for Medical Examiners, Pathologists and other interested Physicians, on Friday, March 29, 1957, from 8:00 A.M. to 4:30 P.M., in the Amphi-Theater and Baruch Auditorium of the Medical College of Virginia, Richmond.

The Medical Examiners will have an opportunity to make investigations with special reference to general examinations of bodies, photographic techniques and the use of body fluids in medico-legal investigations. They will have a joint session with the Pathologists wherein gunshot wounds and special techniques with reference to this subject will be discussed. The Pathologists will see practical demonstrations of the medico-legal autopsy techniques to be employed in deaths involving stab wounds, gunshot wounds and motor vehicle-pedestrians injuries. Stab wounds and gunshot wounds will be inflicted and demonstrated.

The registration fee is $25.00 and registration is limited. For further information address inquiries to Geoffrey T. Mann, M.D., LL.B., Chairman, Department of Legal Medicine, Medical College of Virginia, Richmond, Virginia.

Dr. Charles W. Robertson

Has opened his office at Stafford Court House, to be known as the Medical Clinic Location. This is on the Village Hotel property facing the Court House.

Postgraduate Institute and Convention.

The Twenty-first Annual Postgraduate Institute and Convention arranged by the Philadelphia County Medical Society will be held at the Bellevue-Stratford Hotel, Philadelphia, March 19-22.

On the 19th there will be discussions on Recent Advances in Disturbances of Metabolism, The Evaluation and Treatment of the More Common Urologic Disorders, and Management of Some Allergic Problems in Clinical Practice. On the 20th, the subjects will be Practical Aspects of Treatment of Diseases of the Skin, The Treatment of Common Neoplasms, Advances in Hematology, and The Differential Diagnosis and Management of Jaundice Due to Intrahepatic and Extrahepatic Disease. On the 21st, the discussions will be on Hormone Therapy, Advances in Drug Therapy, Orthopedic Problems of General Interest, Progress in Pediatrics, and a Clin-

ical Pathological Conference. Subjects for the 22nd are Recent Advances in Diagnosis and Treatment of Pulmonary Diseases, Radioisotopes in Medical Diagnosis and Treatment, and a Symposium on Cardiovascular Diseases.

There will be a registration fee of $10.00 for non-members of the Society and registration should be mailed to C. Wilmer Wirts, M.D., 301 South 21st Street, Philadelphia 3. This Institute has been approved for credit by the American Academy of General Practice.

Winchester Memorial Hospital.

Dr. E. C. Stuart, Jr., has been elected president of the medical staff of the Winchester Memorial Hospital, succeeding Dr. Hugh Clark. Other officers are Dr. John C. Hortenstine, vice-president; Dr. Victor F. Albright, secretary, and Dr. Monford D. Custer, Jr., treasurer. The following chiefs of services will serve during 1957; medicine, Dr. Hortenstine; surgery, Dr. R. F. Cline; obstetrics-gynecology, Dr. Arthur L. Wilson; pathology, Dr. George H. Murphy; and radiology, Dr. Ellsworth Johnson.

Dr. June C. Shafer,

Arlington, participated in the American Academy of Dermatology as a member of the Board of Directors. In addition she was a member of a teaching panel on Radiation in Dermatology.

Northampton-Accomack Memorial Hospital.

Dr. W. J. Sturgis, Jr., is the new President of the Medical-Surgical Staff of this hospital: Dr. J. E. Gladstone, vice-president; and Dr. E. M. Kellam, secretary-treasurer. Elected to membership on the Executive Committee, along with the above, are Drs. W. A. Eskridge and C. L. Sinclair. Dr. S. K. Ames was re-elected to direct the work of the Continuation Education program.

Dr. Ennion S. Williams,

Richmond, has been elected president of the Children's Home Society of Virginia.

Dr. James Chitwood

Has been elected president of the Pulaski County Heart Council at its organizational meeting on January 8th. This is the first Heart Council to be formed in Virginia and as such conducts a year-round program depending on which seems best for the area concerned. It is primarily one of education and community service.

American Academy of General Practice.

More than twenty-five prominent physicians will appear on the four-day scientific program of the Academy to be held in St. Louis, March 25-28. There will also be 73 scientific and 260 technical exhibits. All programs and exhibits will be in the Kiel Auditorium.

Dr. John S. DeTar, Milan, Michigan, is president of the Academy, and Dr. Malcolm E. Phelps, El Reno, Oklahoma, is president-elect.

Congress on Cancer Cytology.

The First Pan American Congress on Cancer Cytology will be held in Miami, April 25-29. The Congress is sponsored by the Southern Society of Cancer Cytology, the Cancer Institute at Miami, the University of Miami and the Cancer Cytology Foundation of America, Incorporated.

Medical and scientific leaders will present a program combining latest advances in cancer detection by cytologic methods, radioisotopes, genetics, microbiology, electron microscopy, the biology of cancer, and research in leukemia. Dr. William Bickers, Richmond, is one of the program chairmen on Clinical Cytology.

Those physicians wishing to present scientific papers should apply to the program chairman, Dr. Wayne Rogers, P. O. Box 633, Coral Gables, Florida. Inquiries relative to scientific exhibits or movie picture presentations should be addressed to Dr. Homer L. Pearson, Box 633, Coral Gables.

An invitation is extended to all physicians interested in cancer diagnosis and research to attend the Congress.

American College of Gastroenterology.

A regional meeting of the Central Region of the College will be held in Grand Rapids, Michigan, March 17th. Members of the medical profession are cordially invited to attend. A copy of the program may be obtained from the Secretary, 33 West 60th Street, New York 23, N. Y.

Dr. T. Neill Barnett, Richmond, is a member of the Board of Governors of the College.

International Fertility Association.

The United States Section of this Association will meet April 22-24 at the Greenbrier, White Sulphur Springs, West Virginia. Full information may be obtained from Dr. Paul L. Getzoff, 400 Medical Arts Building, New Orleans 15, Louisiana.

Obituaries . . . .

Dr. Richard Phillips Bell,

Prominent surgeon of Staunton, died January 23rd, at the age of seventy-five. He was a graduate of the former University College of Medicine, Richmond, in 1902. Dr. Bell was chief of the staff of King's Daughters Hospital and a consultant for the Virginia School for the Deaf and Blind and Western State Hospital.

He was a past president of the Augusta County Medical Society and the Medical Association of the Valley of Virginia. Dr. Bell was a Life Member of The Medical Society of Virginia, having joined in 1910. He served as a vice-president in 1924.

An editorial in The Staunton New-Leader states: "Dr. Richard P. Bell served his community in many ways, but its gratitude to him is based primarily upon his ability as a surgeon, in which calling he gave unsparing of himself during a distinguished career of nearly half a century. The people of this area were greatly blessed by having one of his exceptional talents and devotion available during a long period of years when specialists in this field were few. He kept well abreast of his profession up to the time of his retirement several years ago, and was recognized for his abilities far beyond the confines of his chosen area of practice."

Dr. Bell is survived by his wife, three daughters and three sons, Drs. Richard P., Jr., Thomas Grasty, and Lewis F., all of whom practice in Staunton.

Dr. Frank Harwood Lukin,

Prominent physician of Pamplin, died February 5th. He was eighty-four years of age and a graduate of the former University College of Medicine, Richmond, in 1900. After his graduation, Dr. Lukin located in Pamplin as a general practitioner and druggist. He was active in the civic affairs of his community, having served as Mayor and town councilman.

Dr. Lukin was a Life Member of The Medical Society of Virginia, having joined in 1904.

His wife survives him.

Dr. Burleigh Nichols Mears,

Beloved physician of Belle Haven, died January 10th following a brief illness. He was sixty-seven years of age and a graduate of the Medical College of Virginia in 1914. Dr. Mears had practiced in lower Accomack and Northampton Counties since his graduation. He had always taken an active part in civic and medical affairs of his county. "The Belle Haven physician, all through his lifetime sacrificed himself for others, as everyone knows. He loved his patients, he loved his work, and his was an unselfish devotion to both." (Editorial in local newspaper).

Dr. Mears had been a member of The Medical Society of Virginia for forty years. He was a member of Ocean Lodge No. 116 A. F. & A. M., and a director of the Peoples National Bank of Exmore.

His wife and two sons survive him.

The following resolutions were adopted by the Medical Staff of the Northampton-Accomack Memorial Hospital:

WHEREAS, God, in His infinite wisdom has removed from among us our friend and fellow practitioner, Dr. B. N. Mears, of Belle Haven, on the Eastern Shore of Virginia, and

WHEREAS, we and the multitude of his friends and patients will miss his outstanding sympathy and devotion, his sincerity and his charitable attitude to those with whom he had contact, and

WHEREAS, his devotion to his family and associates was a light to the community,

THEREFORE, BE IT RESOLVED, that we mourn his passing, that we express our deepest sympathy to his family, that we so record our thoughts by sending a copy of these resolutions to his family and to the Virginia Medical Monthly, and that they be entered on the minutes of the Staff of the Northampton Accomack Memorial Hospital and on the minutes of the Northampton County Medical Society.

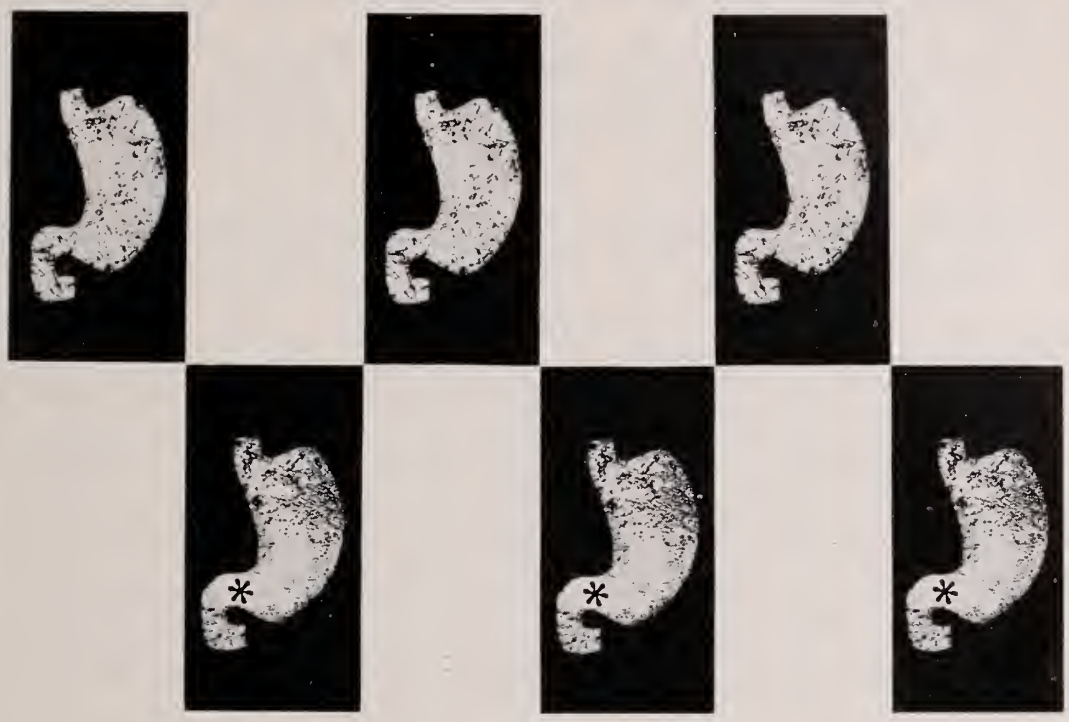
H. L. DENOON, M.D., *Chairman*
JOHN R. HAMILTON, M.D.
W. CAREY HENDERSON, M.D.
Committee

Dr. Ewell Claude Jamison,

Rocky Mount, died January 29th. He was fifty-six years of age and a graduate of the Medical College of Virginia in 1927. Dr. Jamison had practiced in Rocky Mount since his graduation. He was a member of the Rocky Mount Town Council, a director of the Bankers Trust Company, a member of the Lions Club, and a trustee of the Franklin Memorial Hospital. Dr. Jamison had been a member of The Medical Society of Virginia since 1928.

His wife, two daughters and three sons survive him.

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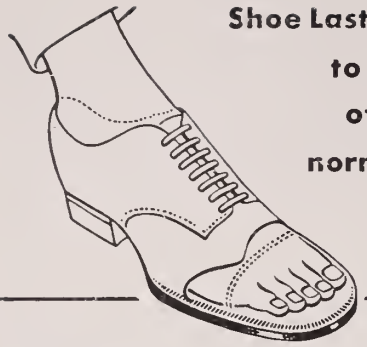
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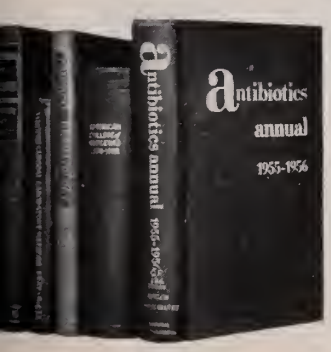
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1. Romansky, M.J., et al., Antibiotics Annual 1955-1956, p. 48.
2. Waddington, W. S., Maple, F. C., and Kirby, W. M. M., A.M.A. Archives of Internal Medicine, 1954, p. 556.

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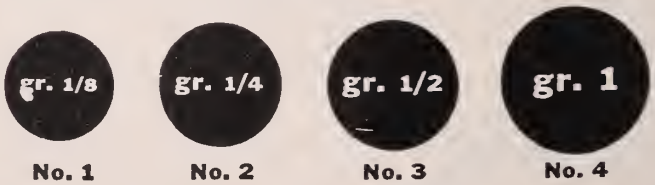
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*Geiger, E.: Digestion, Absorption and Metabolism of Protein, in Wohl, M. G., and Goodhart, R. S.: Modern Nutrition in Health and Disease, Philadelphia, Lea & Febiger, 1955, pp. 98-143.

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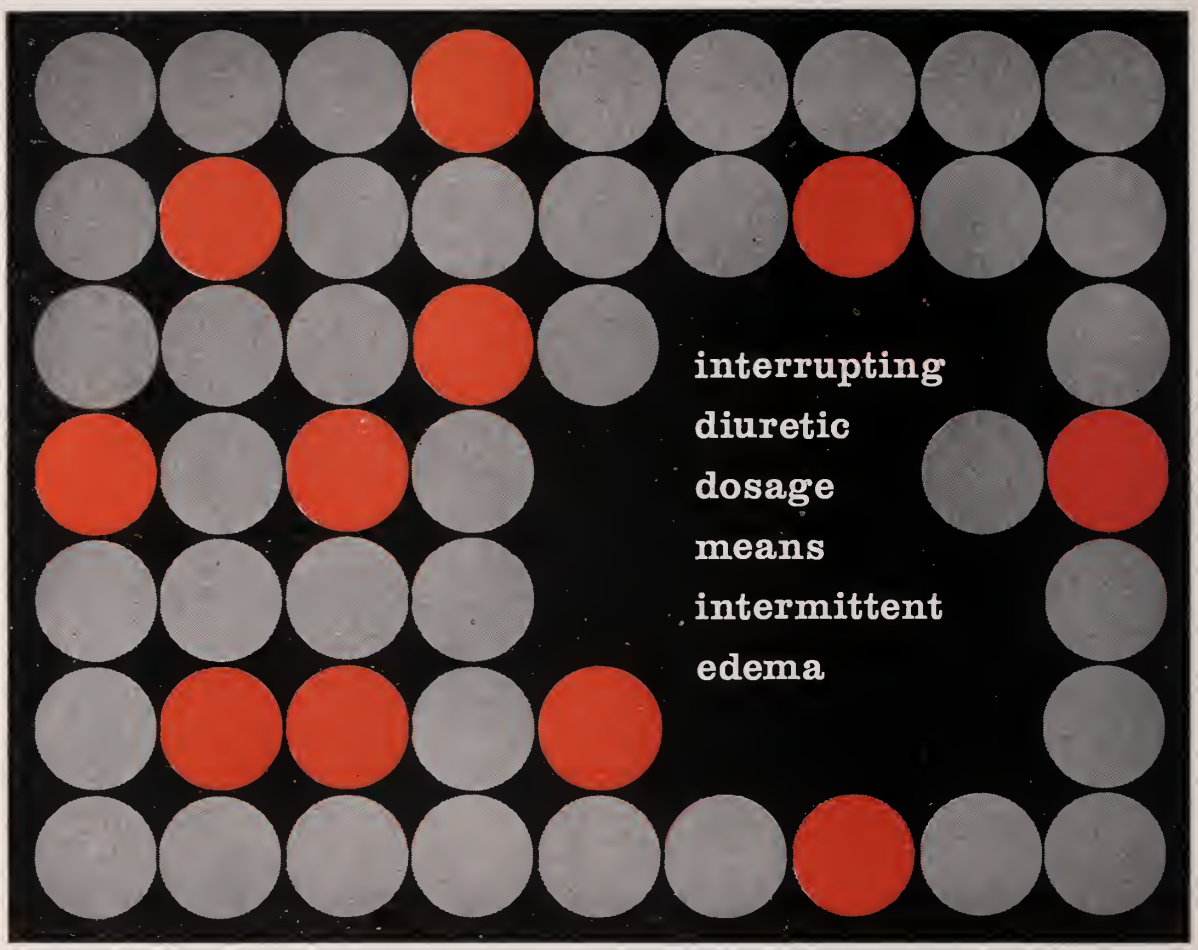
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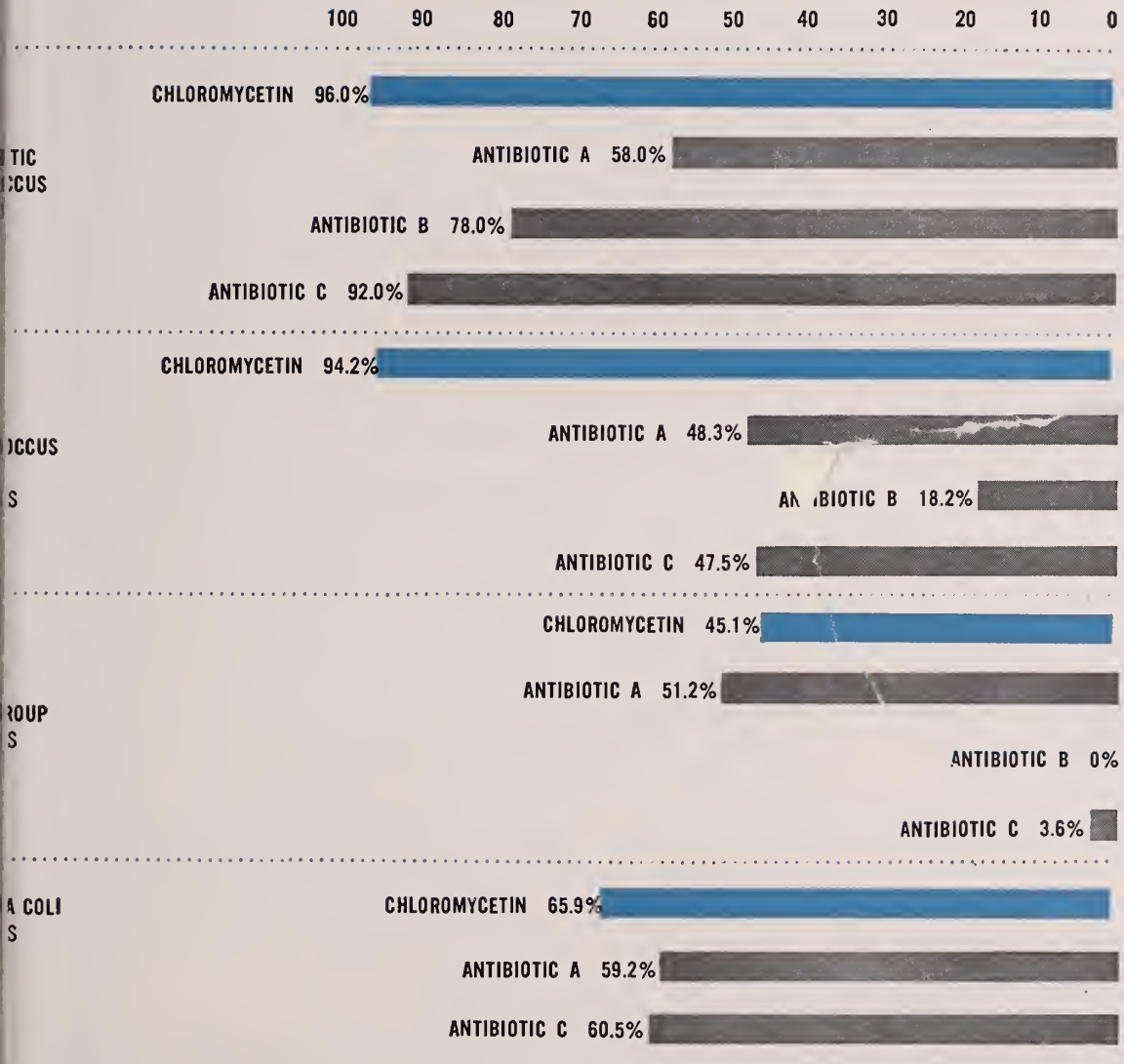
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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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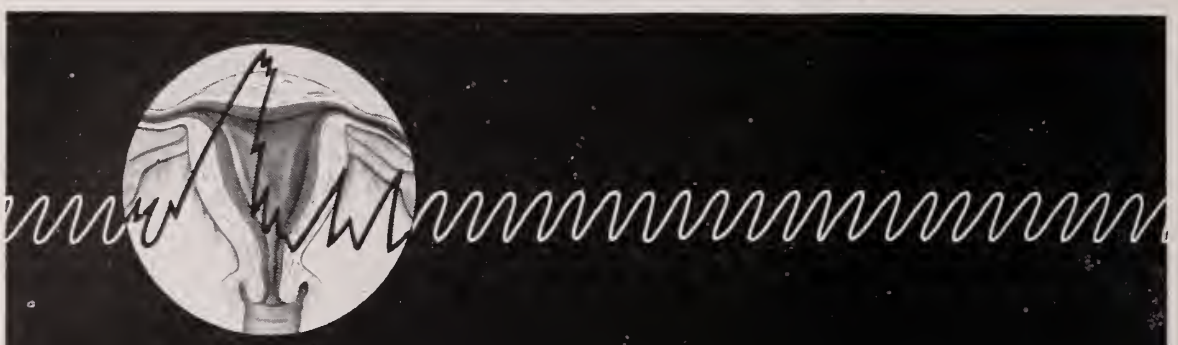
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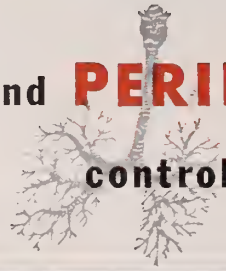
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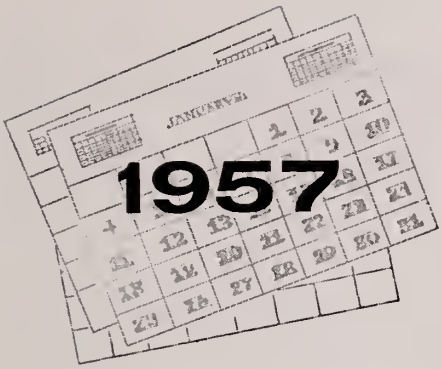
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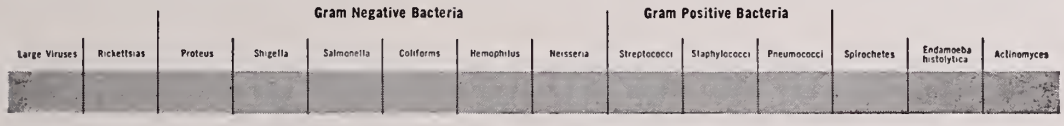
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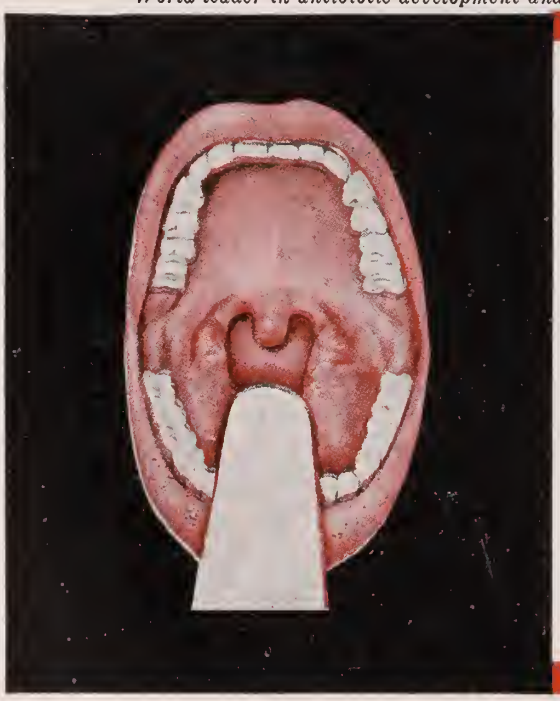
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1. Carter, C. H., and Maley, M. C.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 51.

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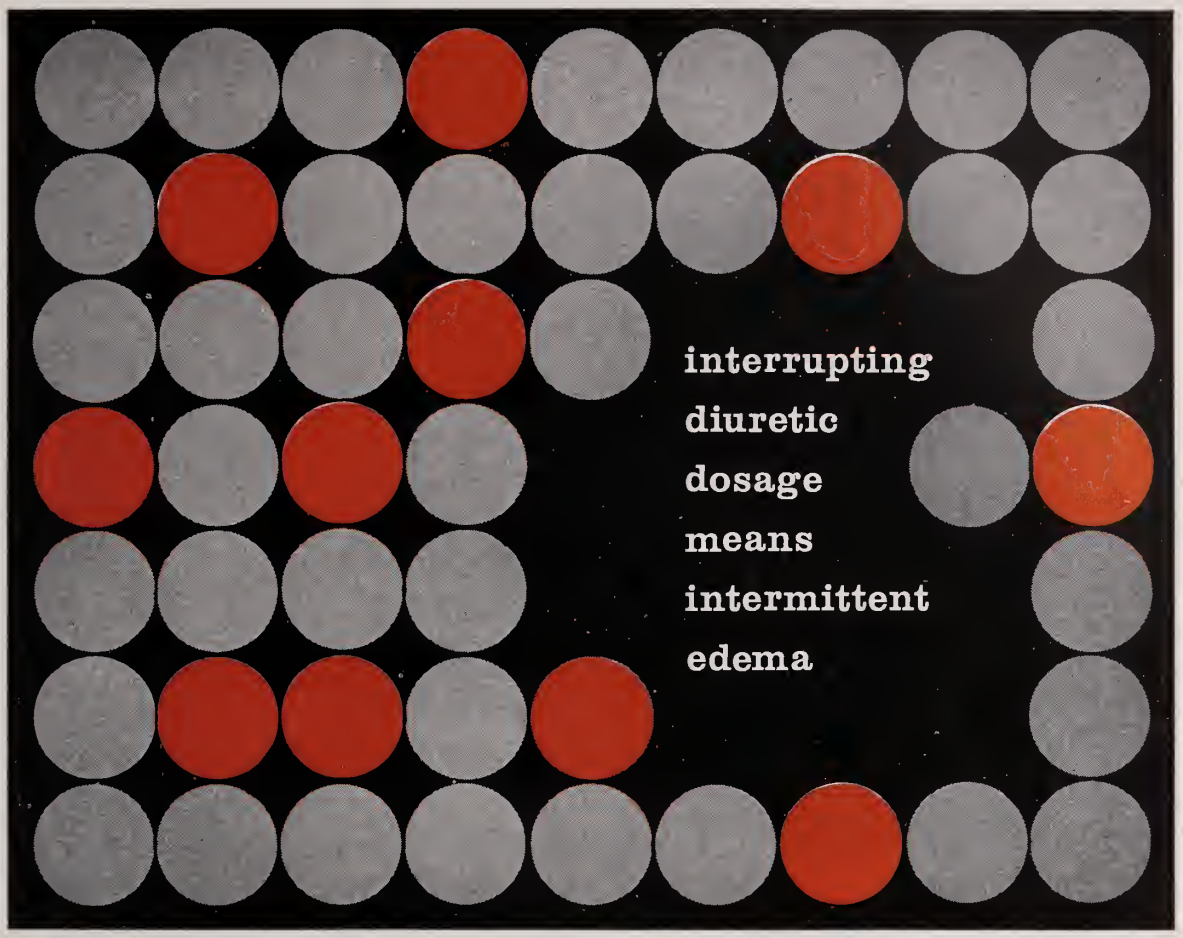
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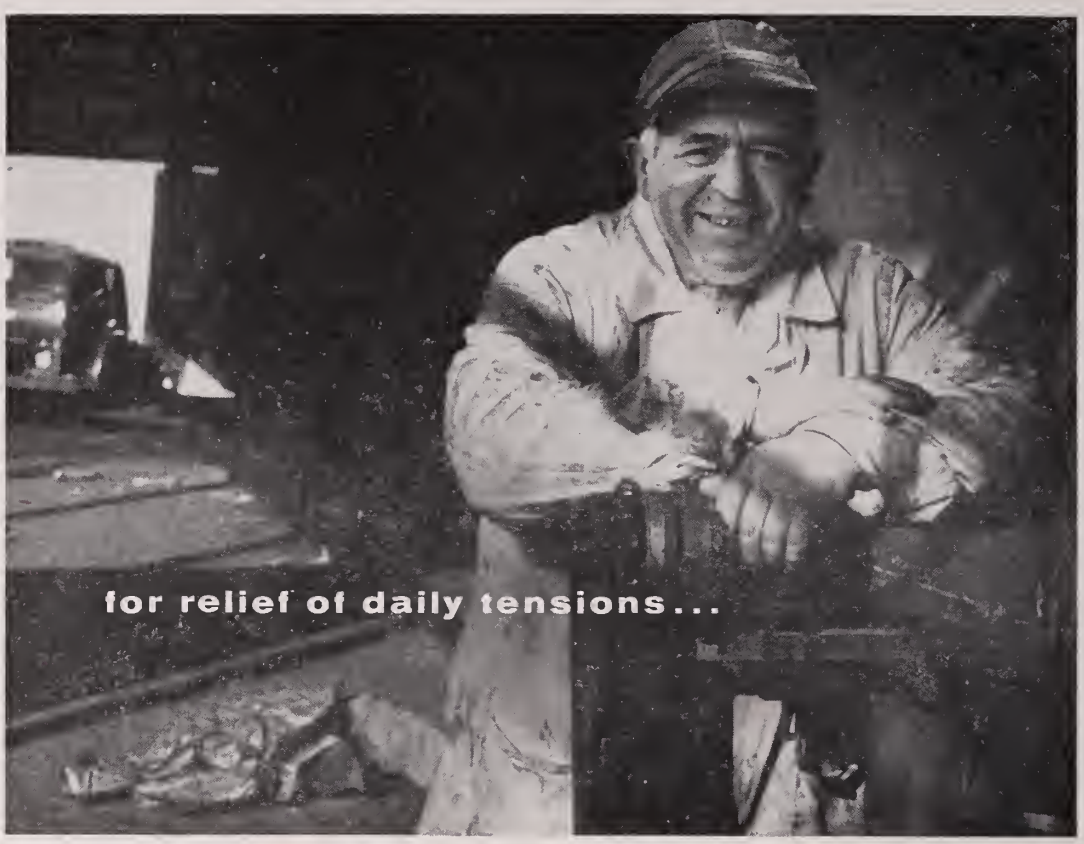
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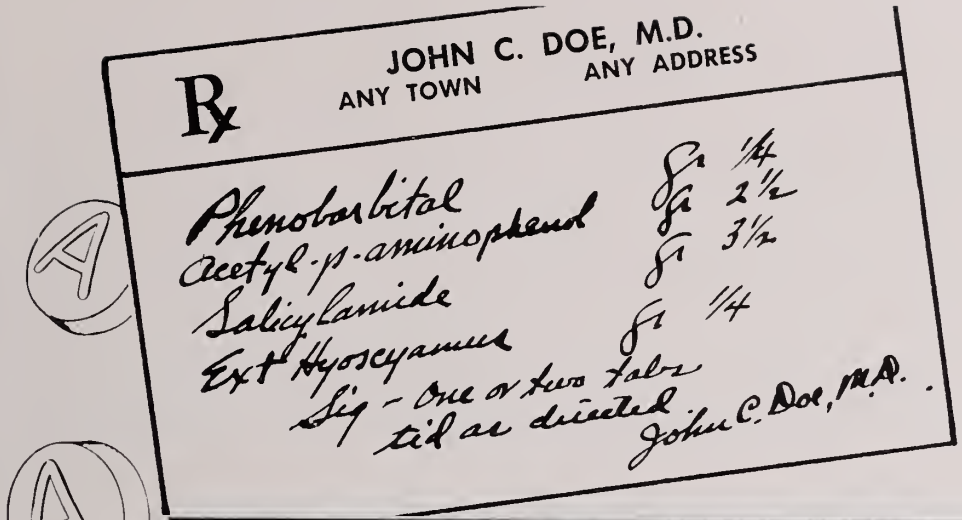
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*Ferguson, J. T.: J. Am. Geriatrics Soc. *4*:1080, 1956.

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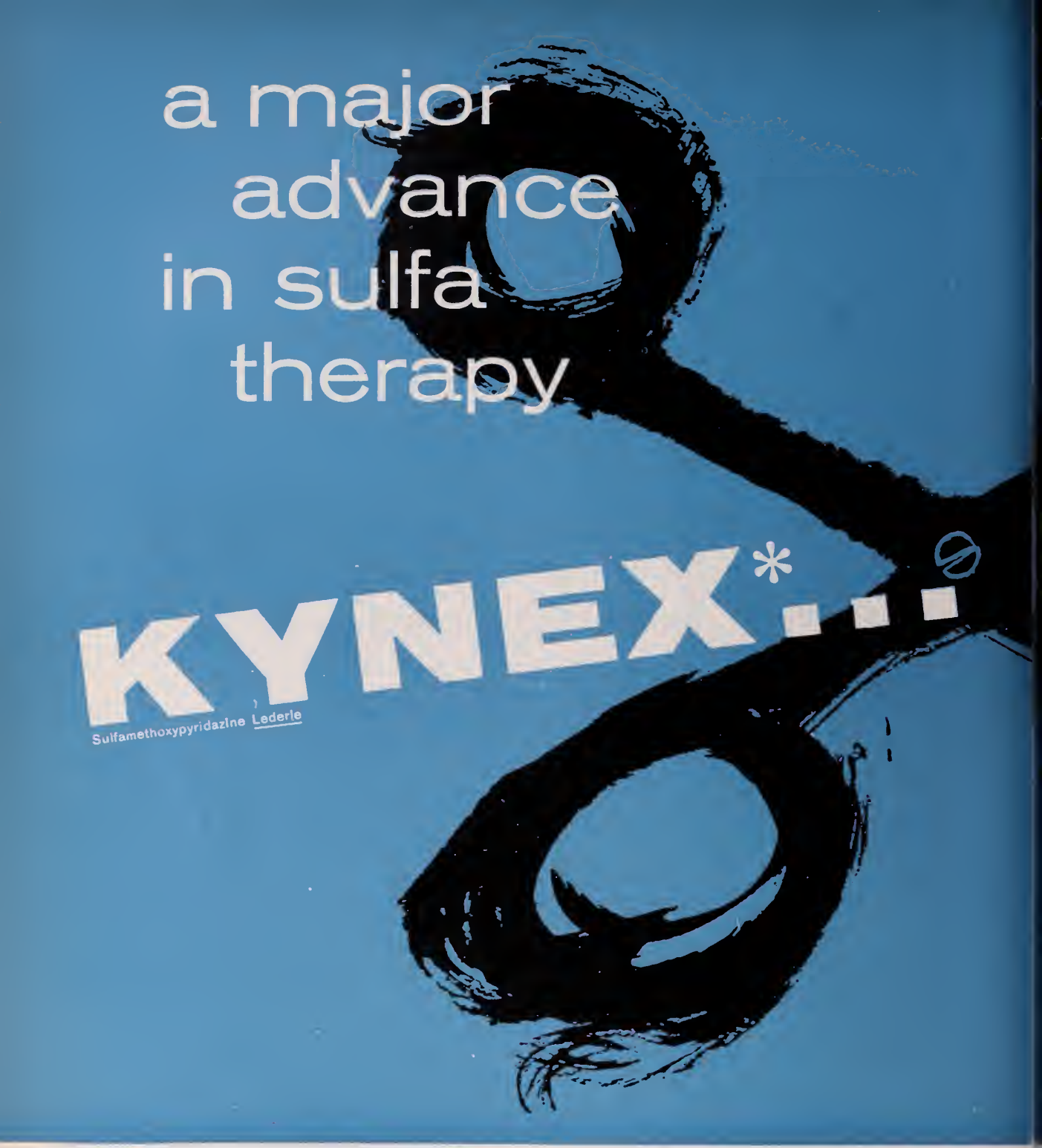
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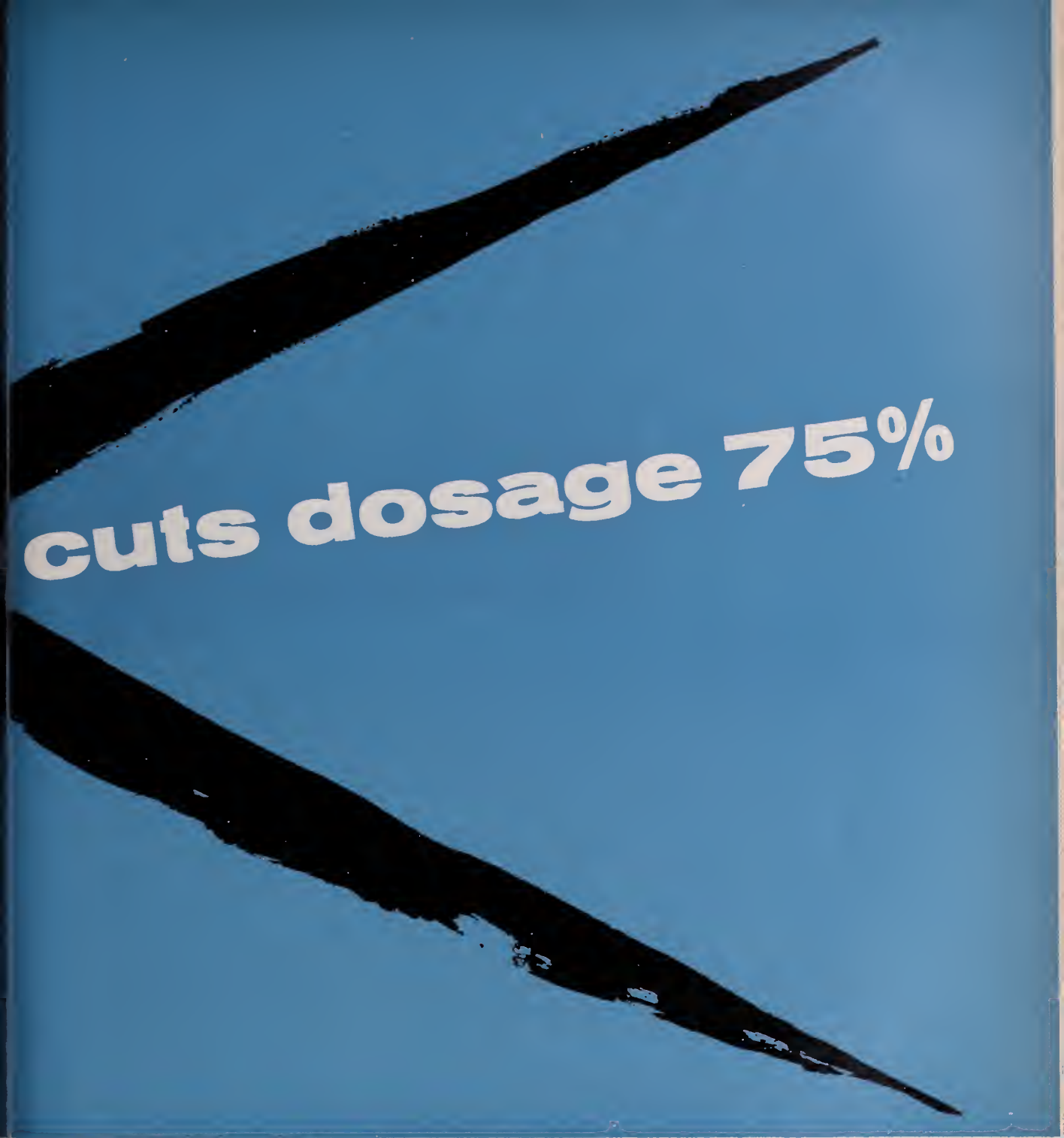
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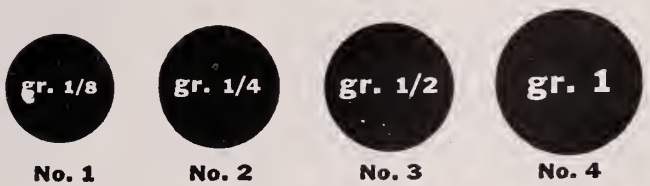
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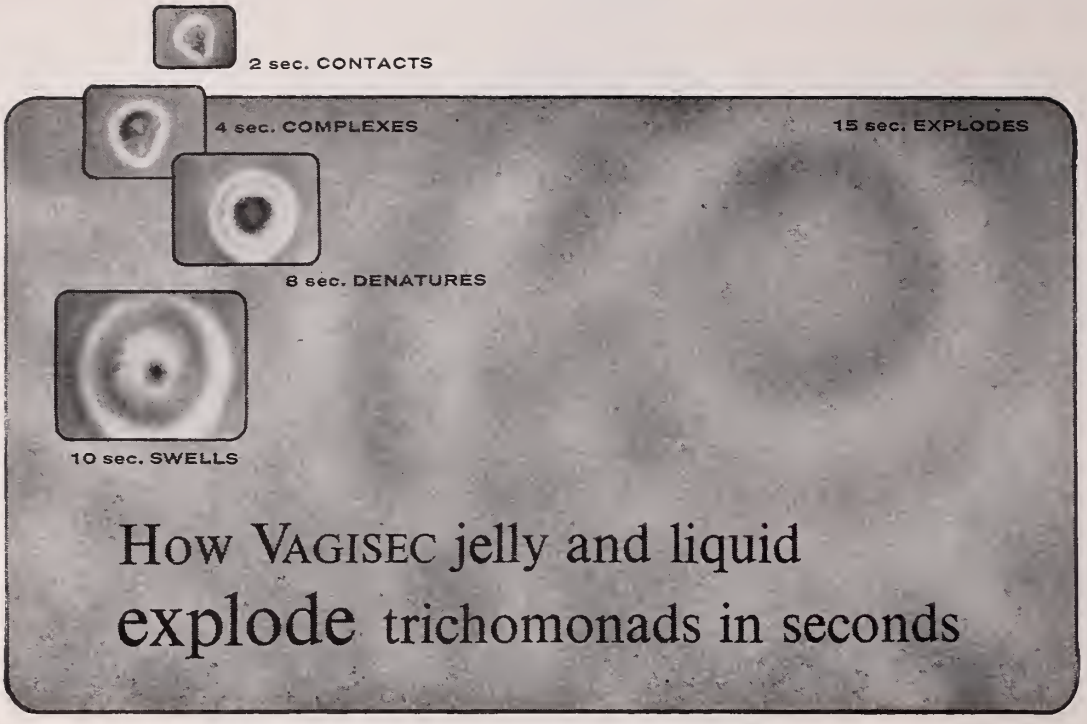
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The Virginia
MEDICAL
MONTHLY

April, 1957
Vol. 84, No. 4
Whole No. 1258

Guest Editorial . . . .

The Richmond Poison Information Center

IN 1956 there were reported[1] 138 fatalities in Virginia due to the ingestion of common, more or less "every day", solid and liquid household articles. Of these, 102 were accidental. It is encouraging to note that in the past five year period the number of deaths from poisoning has not increased despite the population increase. It is estimated[2] that the ratio between non-fatal and fatal cases of poisoning is of the order of 100 or 150 to 1. With reference to the morbidity from poisoning in the Richmond area, during an approximately three week period in July 1953, a total of 21 persons were treated for intoxications of one type or another in the two emergency rooms of the Medical College of Virginia[3]. It is evident from these data that the extent of illness, fatal and non-fatal, resulting from poisoning is impressive and presents a challenge to the medical and allied professions in terms of prevention and treatment.

Based on national figures[2] about 30 per cent of all fatal accidental intoxications occur in children under five years of age. Because of the obvious relationship of such a situation to pediatric practice, and recognizing the importance of a systematic approach to it, pediatricians, led to a large degree by the Committee on Accident Prevention of the American Academy of Pediatrics, have played an active role in bringing about the establishment of facilities for the better dissemination of information on the nature of potentially poisonous preparations and indicated treatment if poisoning does occur. From the efforts of this group and several others, some 25 to 30 so-called "Poison Information Centers" have been developed throughout the country. The first was organized in Chicago in 1953 with Dr. Edward Press as Director.

To a degree the aims and purposes of a Poison Information Center have been met in the Richmond area in an informal manner by the emergency rooms of the several hospitals and by the Toxicology Division of the State Medical Examiner's Office. With the hope of coordinating and making these existing facilities even more useful, representatives of the Richmond Pediatric Society, the Virginia and Richmond Health Departments, the Richmond Area Safety Council, the Richmond City Schools, the Monacan Junior Woman's Club and the Medical College of Virginia have organized the Richmond Poison Information Center. Dr. Sidney Kaye, Toxicologist in the

Office of Chief Medical Examiner, was named Director of the Center with Dr. Lillian C. Lindemann, of the Richmond City Health Department, as Assistant Director. The Center began operation on March 15th with arrangements for 24 hour service.

The Poison Information Center is not intended to be a facility for the actual treatment of poisoning; this aspect of the problem is quite adequately provided for by the emergency rooms of the local hospitals. The primary function of the Center will be to supply, on the request of physicians, information as to the constituents of a suspected preparation or plant as the cause of poisoning and possible guidance in treatment. When it is realized that there are an estimated[4] 250,000 "name" products alone available to the public about which the question of poisoning could arise, the importance to physicians of a ready source of information concerning their composition becomes apparent. It will be the aim of the Center to maintain as complete a set of reference files on this subject as possible. It is anticipated that files will also be kept bearing on the most recent advances in the treatment of poisonings. Through cross indexing it is hoped that quick reference can be made both to cover the active ingredients involved in a given case as well as the modern concept of therapy. In addition to the master set of files which will be reposited in Dr. Kaye's office, there will be one set each in the Medical College of Virginia emergency room and in the Department of Pharmacology. It is contemplated that, should it be deemed desirable, other stations in and around Richmond would also be provided with sets of these files It should be mentioned that the members of the Monacan Junior Woman's Club are generously devoting much time and energy in preparing the duplicate files and in calling attention to plants and household products about which the Center should have information. Actually they were a very important force in bringing about the inauguration of the Center.

In addition to rendering service which might be useful in an immediate case of poisoning, the Center plans to aid in the prevention of poisoning through educational programs arranged for the general public, both adults and children. Furthermore, through gathering data on poisoning cases it is expected that information will accumulate which would lend itself to various types of statistical study.

While this pilot center is getting under way in a modest fashion, it is hoped that the experience it gains might be useful to other communities throughout the State for which a similar type of service might seem needed. Naturally, those of us associated with the Richmond Center would be most grateful for any comments or suggestions for bettering our own work.

Harvey B. Haag, M.D.
Permanent Chairman

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Editor's Note: Dr. Haag is Professor of Pharmacology at the Medical College of Virginia.

Civilization and Disease

FRANK L. APPERLY, M.D., F.R.C.P.
Richmond, Virginia

OCCASIONALLY I am told that many or most of our diseases are the result of our modern civilization, that if we would only live as "God meant us to live", "closer to Mother Nature" and so on, we would be a healthier people. The bright worthies that tell me these things usually omit to mention how the Lord communicated His wisdom to them, and cheerfully ignore the fact that cancer, for instance, is common in certain other animals and even in plants, which, one would imagine live close enough to Mother Nature.

And yet it is quite obvious to all that at least some of our ills are somehow connected with the hurry, bustle and stress of modern life, and even with the good things of life. But are these disabilities brought about directly by stress and strain, as such? Or is it rather that many people, failing to adapt themselves to new situations, continue to react in a primitive, "uneducated", or "uncivilized" way to stress? That, in fact, they have not learned to curb natural emotions, through one or more of the methods known to us? There is, indeed, no subject more important, or more in need of clarification, than the principles governing the reactions of the body to changes of environment and the maintenance of homeostasis. It involves the mechanism of life itself.

The law of the jungle and of our primitive ancestors was "kill and eat or be killed and eaten"—a simple and uncomplicated law. Only those animals or men that could best and most rapidly adapt themselves to the sudden emergencies of the prowling jungle, survived—by fight or by flight. There were also the rigors of climate and other physical conditions to be withstood.

From the point of view of modern man, the descendant of generations of survivors, this piece of Divine planning was excellent. Over untold thousands of years the adaptive apparatus was improved—by ruthless natural selection—and has finally achieved a high degree of perfection.

But in recent times—a mere twenty thousand years or so—men began to associate into groups and tribes, and mutual defense began to supplement individual defense. This was the beginning of civilization, involving the imposition of customs and rules and laws which curbed the operations of the primitive defense mechanism of the individual, thus creating psychological and physiological conflicts within his body.

Finally men, or some men, with developing reason, philosophy and religion, learned to re-route their reactive energies into other or more useful channels, or to accept the inevitabilities of life with serenity and equanimity, and thus avoided those mental conflicts and hormonal imbalances with which their less adaptable brethren are so commonly afflicted. These men are the truly educated men, the highest products of our civilization.

A. THE HOMEOSTATIC OR ADAPTIVE MECHANISM

One of the essential conditions for the continued health of the cells of the body is the maintenance of the constancy, within narrow limits, of the temperature, the osmotic pressure, and the chemical composition of the intercellular fluids which bathe these cells. To maintain these equilibria (homeostasis) the body possesses an apparatus that acts as thermostat, osmotostat and chemostat. Failure of maintenance within certain limits and within certain times may lead to temporary or permanent damage or to death of the cell or even of the whole body.

Every activity of the body tends to disturb these equilibria. Most of these are ordinary everyday activities, such as digestion, respiration, muscular exercise, reaction to cold, heat, etc. and the mechanism of these activities, their resulting disturbances and their readjustments constitute the subject matter of physiology.

There are other forces, however, that may gravely disturb the body's equilibria and lead to much stress on the machinery of the body in its attempt to restore equilibrium, as, for instance, following exposure to the intense or violent muscular activity of "fight or flight", severe cold or heat, high altitudes, trauma, drugs, poisons and even the memories of previous stresses i.e., psychic and emotional disturbances. In these cases the mechanism for maintaining or restoring equilibrium may bring about or initiate certain compensatory or counter-activities. Some of these constitute the symptoms of disease.

The machinery for coordinating these various compensatory activities might be likened to a General Headquarters Staff with its descending chain of command. This apparatus is composed of the hypothalamus, the pituitary, the ductless glands and the autonomic nervous system.

Into the hypothalamus (the old primitive brain) is poured information, not only from the outside world (through sight, hearing, touch, and other senses) but from disturbing events within the body (chemical, thermal and osmotic, and from memories and associations stored in the brain). This information is then relayed to the appropriate parts, nervous or hormonal, of the apparatus, in such a beautifully regulated and coordinated manner that the various equilibria of the body are maintained, or restored, following stress—provided always, of course, that the homeostatic apparatus itself is intact and in good functioning order, and that the stress is not too great.

B. THE TRANSITION FROM PRIMITIVE MAN TO CIVILIZED OR EDUCATED MAN

In order to facilitate discussion, let us consider the state of man during three stages of his transition from the primitive, savage state.

1. The Defensive or Adaptive Response of Primitive Man to External Emergencies.

The primitive emergency mechanism is a complicated one. It might be considered as consisting of two parts: (a) the "Alert Mechanism" under command of the nervous system, which allows the body instantly to assume the "attitude of defense", and (b) the "Fuel-supply and Homeostatic Mechanism" which supplies muscles with energy fuel while maintaining homeostasis as nearly as possible.

(a) Since primitive man lived by the "eat or be eaten" rule, most of his crises involved "fight or flight". It is therefore interesting that sudden crises immediately brought about (through the sympathetic system) all those changes in his body which would be of most value for facilitating those intense activities involved in fight or flight. These changes, which constitute what we might call "the attitude of defense", are as follows—vaso-constriction of all visceral arterioles, resulting in a re-routing of a larger proportion of blood to the muscles, myocardium and brain; mobilization of fuel (glucose and ketones) from liver and fat stores into the blood stream for conveyance to the muscles; constriction of the spleen, with emptying of stored blood into the circulatory system, thus adding to its effective volume; bronchiolar dilatation, facilitating oxygen and CO_2 exchange; sweating; dilatation of the pupils, accommodating for the distant vision of the hunter for his prey or of the hunted for his haven; increase of blood platelets and shortened coagulation time, of survival value in case of wounds; and inhibition of all other functions not of value in fight or flight, i.e., inhibition of gastro-intestinal function together with closure of the sphincters.

It is interesting to note that fever, which we may regard as an "attitude of defense" facilitating those chemical changes involved in combating bacterial invasion and removal of dead tissues, depends upon a similar mechanism.

(b) Prolonged fight or flight or fever would, of course, produce such depletions of the fuel stores of the body, and such alterations in the levels of blood sugar, proteins, CO_2, salts, water and other equilibria as might lead to exhaustion. This is where the pituitary-adrenal cortex axis comes in. By bringing about such changes as gluconeogenesis, retention of salts and water, etc., equilibria and fuel supplies are maintained, and combat or flight sustained. The perfection of this mechanism in our bodies probably depends upon the fact that, over thousands of generations, only those with the best responsive mechanisms survived.

It might be apropos at this point to refer to what various writers have called the Stage of Exhaustion, which follows the stage of adaptation, described above. But we know that, in healthy animals, the various cortical and other hormones, though rapidly depleted, are just as rapidly restored, thanks partly to the rich blood supply to the endocrine glands. We also know by experience that apparently quite healthy people are more vulnerable to infections after heavy exercise, or follow spells of cold weather, exposure to damp and wet, etc. In these conditions there can be no question of exhaustion, and yet their defences are temporarily down, i.e., there is a negative phase. It seems to us we can regard this negative phase as merely an example of the general biological rule that a positive phase is followed by a negative phase, depending on the fact that equilibria are not fixed levels or values, but continual oscillations about an average level in which a movement in one direction necessarily elicits reactive forces which reverse the movement, with an overshooting of the average normal level—a negative phase. But this does not imply a stage of exhaustion.

Although a negative phase is a perfectly normal

phenomenon, it could, of course, be considerably exaggerated in disease, especially in those diseases involving the homeostatic mechanism itself.

2. The Defensive or Adaptive Mechanism in Conflict with Civilization.

However well the emergency and adaptive machinery of the body worked when primitive man roamed and hunted at will and was a law unto himself, there must have been inner conflicts and troubles when he was absorbed into the tribe or group and had to curb his instinctive and automatic reactions in obedience to tribal law, the sacrifice of personal interests for the general welfare. He could no longer kill his fellow-tribesman with whom he quarrelled. Instead, he could only rage and bear resentment. Physiologically, his whole sympathetic-adrenal-thyroid team was in a condition of excessive activity, with consequent cardio-vascular effects, useless mobilization of muscle fuels which were not utilized, and other effects. In our own time we suffer the same rages and resentments against seen and unseen enemies—the income tax commissioner, the over-officious policeman on the corner, social and domestic turmoils, the failure to keep up with the Smiths and Joneses and hundreds of other annoyances. This is all perfectly natural, but our civilized code forbids us to beat up the tax commissioner, the policeman, or other annoyers. Faced with this dilemma some will "escape" into a mental world of self-delusion and dreams, or take refuge in alcohol, drugs or over-eating. Others, often more emotional than philosophic, and often unable to distinguish between the possible and the impossible, will continue to strive and to drive themselves, finally achieving a condition of chronic activity or exhaustion of the autonomic and endocrine systems. Still others continue to rage and to bear resentments against their neighbors and the world. Should these rages and resentments become unduly prolonged, a permanent imbalance of our autonomic nervous system and hormones is liable to occur and lead to pathological changes. These, especially in the presence of certain hereditary and chemical failures, constitute that large group of psychosomatic diseases and metabolic failures which include diabetes, arterial hypertension, duodenal ulcer spastic colon, and others.

3. The Civilized or Educated Man

In all peoples there are some men who have perceived the futility of rages and resentments against the inevitable and have learned to meet the slings and arrows of misfortune with equanimity. These are the truly educated. Some attain this high level by strength of mind and philosophy alone. Others are helped by religion, a belief in God's wisdom and protective care, and are content to leave their worries with Him. The Good Doctor, knowing these things, can do much for his patients, faced with incurable troubles or diseases or deformities, by recreating within them a more forgiving, generous, tolerant outlook, a new philosophy, a new courage to face life and its inevitables, or even a new serenity in the face of impending death. The good family doctor, who knows the whole man, his family, his background, his environment and all the things that make him the man that he is, also knows, with Shakespeare, that "Our remedies oft in ourselves do lie, which we ascribe to heaven."

C. THE DISEASES OF ADAPTATION

It is obvious that the body can respond and adapt itself to environmental changes in a healthy way only when the adaptive mechanism is in good functional order. Abnormalities in the function of the mechanism will lead to abnormal responses of the body to changes in environment. The term "diseases of adaptation" should be restricted to those conditions which adversely affect the adaptive mechanism and hence its ability to respond in a normal way.

On general principles we would expect more or less failure of the adaptive mechanism under two sets of conditions, namely;

(a) Organic disease of the homeostatic mechanism itself, e.g., tuberculosis or tumors of the adrenals (Addison's disease); trauma, tumor or meningitis affecting the hypothalamus; infarction or trauma of the pituitary gland; pheo-chromocytoma; the severe anoxia of prolonged shock, and others.

(b) An insufficient supply of the raw materials necessary to create and maintain the necessary enzymes involved, or to supply them with adequate substrates for the production of their various hormones (chemical insufficiencies). We know, for instance, that the stress reaction is impaired in deficiencies of vitamins A, C, pyridoxine, riboflavine, and pantothenic acid. But we will require a vastly increased knowledge of this field if we are to deal successfully with these deficiencies and their numerous and common results.

The various instances of hormonal imbalance, such as occur with puberty, the menopause, old age and undue psychic and emotional stresses in some people, called "functional" and commonly ascribed to "ex-

haustion" of one or more of the glands concerned, are more likely, we feel, to be examples of chemical insufficiencies, sometimes perhaps depending on defects of heredity. But the evolution of the civilized state with its softer living conditions, unbalanced diets and increased emotional inhibitions and conflicts, has undoubtedly done much to initiate and aggravate weaknesses in our homeostatic apparatus.

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The American Cancer Society

The American Cancer Society has three organizational elements: The National Society, with headquarters in New York City, sixty divisions and 2,590 local units.

The program of the American Cancer Society is threefold—Education, Research, Service. The educational program is directed to the public and to the medical profession. The emphasis in public education is upon periodic examinations for cancer, recognition of danger signals, and an encouraging outlook in cases promptly diagnosed and adequately treated. Every medium of publicity is used—radio and television, national news services and magazines, booklets and exhibits.

Professional education tries to provide doctors with the latest information on cancer and to improve the means for diagnosis and treatment through special training courses. Clinical fellowships are made in surgery, radiology, pathology, gynecology, urology, internal medicine, etc. Grants are made through institutions approved for postgraduate training by the American Medical Association. Since 1948 a total of 864 fellowships have been awarded. Since 1953 fellowships for training in radiation therapy in European centers have been awarded 12 people. Postgraduate fellowships in exfoliative cytology have been granted to 61 pathologists.

A more general educational program is available to all doctors. A library of medical films demonstrating diagnosis and treatment methods of proved effectiveness is now available. Two bi-monthly periodicals are published by the National Society: *Cancer,* a scientific journal for the clinical investigator, and *CA, A Bulletin of Cancer Progress,* for the practitioner. *CA* is distributed through the Divisions and is now received by 35 per cent of the country's registered physicians. Other publications include *Cancer Current Literature,* a monthly index to medical literature, and the *Cancer Monograph Series,* dealing with specific forms of cancer. A lending library of demonstration slides is available to lecturers at medical meetings and exhibits are provided for state and national meetings.

Closely allied to the educational activities of the Society is the research program. During 1955 the Society allocated $6,100,000 for its national research program and the Divisions and, in addition, currently support research to the extent of $1,000,000 a year.

The service program, carried out largely in the Divisions and their units by thousands of devoted volunteers is impressive. It includes such services as an information center which is a link between the cancer patient and his family and physician, local hospital, social agencies, nursing services preparation of dressings, loan closets of sick room supplies, rehabilitation classes, and home visiting.

During the month of April each year the American Cancer Society conducts an educational and fund raising campaign. The national Society's goal this year is $30,000,000. The Virginia Division's goal is $475,000. The crusade theme is again this year "Fight Cancer with a Checkup and a Check."

The Vulnerable Middle Lobe

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DIRECT SURGICAL attack on intrathoracic lesions became feasible after acceptance of intratracheal anesthesia, the discovery of antibiotics and safe techniques of blood replacement. Prior to this, intrathoracic disease too often remained in the realm of speculation, or only the terminal events were viewed at necropsy. The desirability of better localization of lesions resulted in better diagnostic techniques and the realization that isolated portions of the lung could produce symptoms similar to those of more extensive involvement. First mention that the right middle lobe could be incriminated was in 1937 when Brock in England[1] described the effects of tuberculous lymphadenitis upon the major bronchi. The first publication in America describing atelectasis, fibrosis, and pneumonitis of the right middle lobe as a clinical entity appeared in 1948.[2] Since then numerous cases have been reported[3,4,5] The findings have been quite uniform and difference of opinion has been confined in the main to terminology. Should it be called "the middle lobe syndrome", "the shrunken right lobe", or "middle lobe disease"?

The anatomical basis for the vulnerability of the right mid lobe to obstruction and its sequelae is twofold[6]: first, the almost 90 degree angle at which the mid lobe bronchus leaves the right main bronchus and second, the fact that the mid lobe bronchus lies in the lymphatic pathway from the right lower lobe and is closely surrounded by nodes which drain the lower and middle lobes. The sequence of events leading to bronchostenosis consist of infection, tuberculous or otherwise, in the right lower or middle lobe, spread of the infection via lymphatic drainage to the regional nodes and an acute adenitis (Fig. 1). The enlargement of the nodes may be sufficient to cause complete or partial obstruction abetted by the edema and congestion distal to the obstruction. If drainage and subsidence of the inflammation occurs, fibrous tissue proliferation of the bronchial wall or adjacent lung parenchyma may lead to distortion of the bronchus facilitating obstruction or subsequent infection. A caseous or calcareous node may ulcerate through a bronchus leaving a permanent partial or complete stricture. Bronchiectasis as elsewhere results from degenerative change in the bronchial wall due to infection, atelectasis, and distention of the bronchial lumen with mucus and the products of infection.

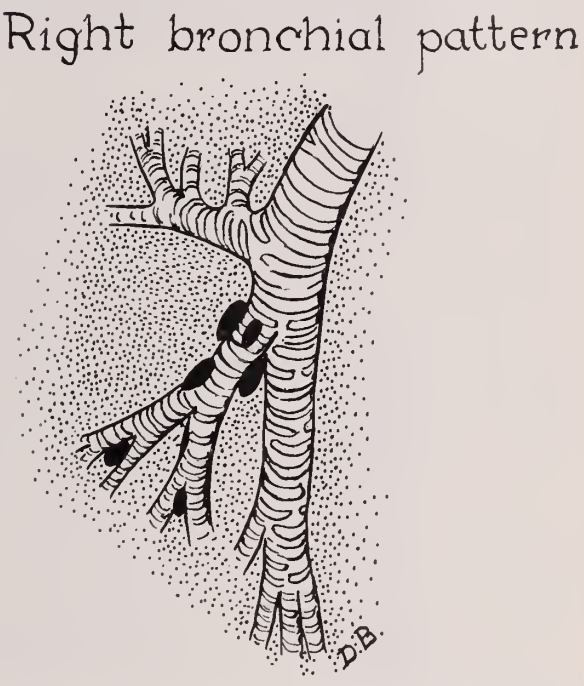


Fig. 1—Diagram showing variation in location of nodes around right mid lobe bronchus.

For a portion of a lung to become atelectatic, two factors must be present. The source of air must be eliminated and there must be sufficient circulation to remove the air trapped distal to the obstruction. The reversibility of the atelectasis depends on the duration of the state of airlessness, the amount of inflammation, and the fibrous tissue formation (Fig. 2). Grossly a resected atelectatic lobe is a fairly firm, shrunken mass of fibrous-like tissue. Microscopically there is a chronic pneumonitis, fibrous tissue proliferation, compression of the alveoli which contain desquamated and inflammatory cells. Often dense accumulation of lymphocytes are scattered throughout.

We have had the opportunity of seeing 27 cases

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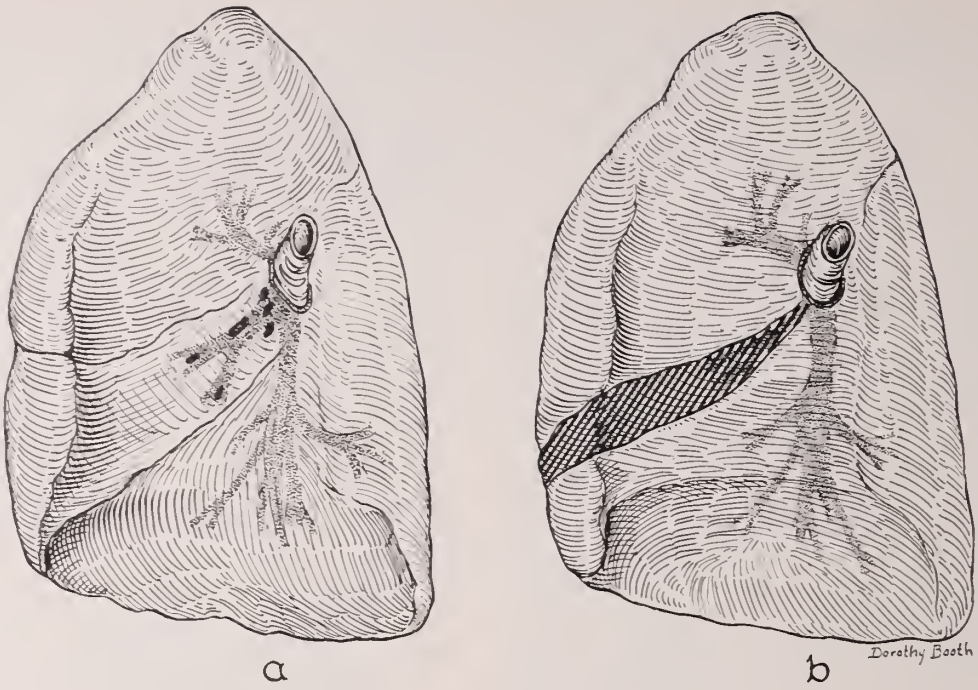


Fig. 2—Schematic drawing showing (a) normal and (b) atelectatic mid lobe, anterior-medial aspect.

with findings of middle lobe disease. There were 17 females and 10 males. Age incidence varied from 5 to 81 years, the majority occuring after the third decade (Table 1). Symptoms were nonspecific, merely indicating that some type of respiratory

Table 1

Right Mid Lobe Disease

Male	10	Atelectasis, Infection	17
Female	17	Bronchiectasis, Infection	9
		Abscess	1
Total	27		

Youngest: 4½ Oldest: 81

Age by Decade:

1-10	11-20	21-30	31-40	41-50	51-60	60 Plus
3	0	3	8	3	5	5

abnormality was present. Duration of symptoms was 3 weeks to 6 years; in the majority it was 3 to 12 months (Table 2). Physical findings were not helpful in the diagnosis; those present were

Table 2

Right Mid Lobe Disease

Symptoms

Duration: 3 weeks to 6 years
Most had symptoms 3 to 12 months
27 cases

Cough	26	Pain	8
Sputum	11	Hemoptysis	6
Wheeze	10	Fatigue	4
Fever	9	Shortness of Breath	3
Recurring Resp. Infection	8		

indicative of nonspecific bronchitis and pneumonitis and included rales, wheeze and, in acute or recurring infections, fever, tachycardia, and weight loss. Laboratory studies were equally nonspecific except when the tubercule bacillus was found.

Roentgenographic studies offer the most diagnostic help and of these the lateral chest film is the most informative. The posterior-anterior film will usually show an abnormality in the inferior aspect of the right hilar area, possibly leading to the right cardiophrenic angle, which could be interpreted as localized in the right lower lobe. Hilar calcium deposits may be present but this is such a common finding that the true import may not be appreciated. In the well developed mid lobe atelectasis the lateral film is almost pathognomonic, the lobe appearing as a slender, well delineated opacity extending anteriorly and slightly inferiorly from the hilum, ending near the anterior chest wall. Calcified nodes may be near the medial border of the density (Fig. 3, 4). Since the middle lobe is of comparatively small volume its atelectasis is insufficient to alter the intrathoracic pressure sufficiently to produce mediastinal shift or elevation of the diaphragm, the findings in upper or lower lobe atelectasis.

The patterns in bronchograms vary. The right mid lobe bronchus may not be outlined, which could be attributed to faulty position when the contrast media was introduced. The bronchus may be filled

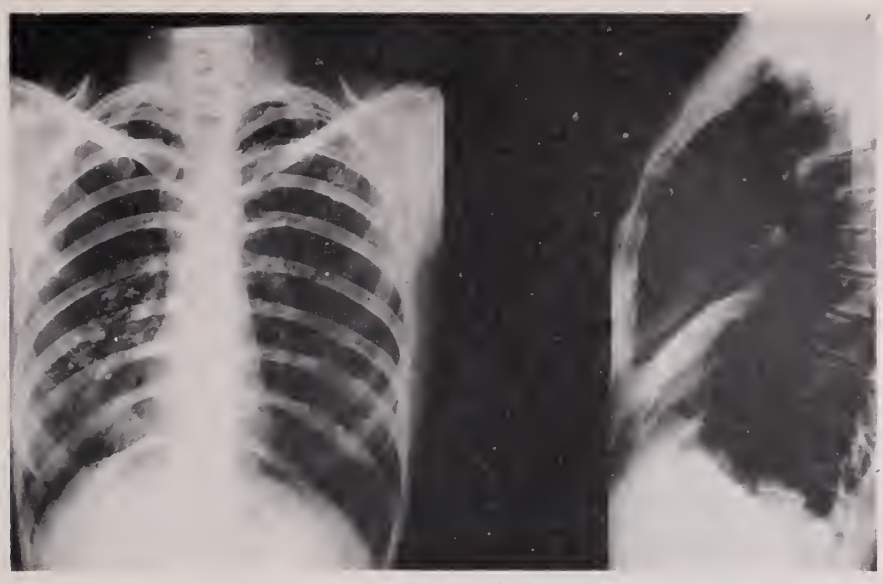


Fig. 3—P-A and right lateral films of right mid lobe atelectasis.

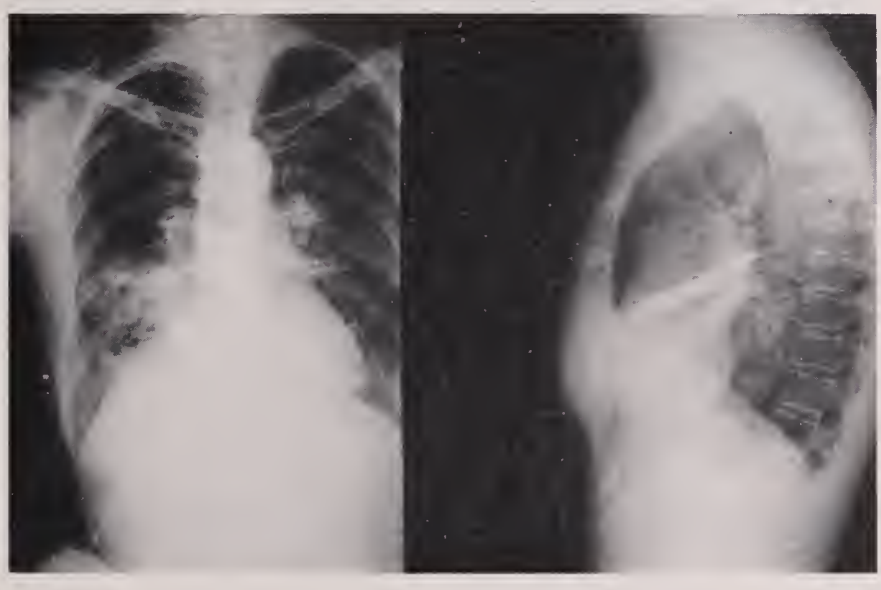


Fig. 4—P-A and right lateral films of right mid lobe atelectasis. The lobe was resected because of recurring hemoptysis.

for .5 to 2 cm. with an abrupt, complete obstruction, or varying degrees of bronchiectasis may be present. Bronchograms were done on 11 patients. In one the mid lobe bronchus did not fill; on exploration a lymph nodes was found blocking the bronchus. One showed an obstruction one cm. distal to the orifice. Bronchiectasis was present in seven.

Other writers have found that bronchoscopy was of considerable diagnostic value. Of the 15 cases who were bronchoscoped two showed obstruction, in one it was produced by a partially extruded node and in the other by granulation tissue in which tubercle bacilli were found. Purulent secretions were seen issuing from the mid lobe orifice with inflammation of the adjacent mucosa in 4. Bronchoscopy is desirable to rule out foreign body, to obtain secretion or tissue for study, and to get a general idea of the state of the visible tracheobronchial tree.

Definitive treatment is surgical excision of the lobe and regional nodes. Resection was carried out in 7 following failure to improve on conservative measures. In these hemoptysis or recurring acute episodes were the deciding factors. Bronchial drainage following bronchoscopy was effective if the symptoms had not been present over several months and this procedure is worthwhile for both its diagnostic and therapeutic value (Fig. 5). Cultures of sputum and aspirates and drug sensitivity tests were carried

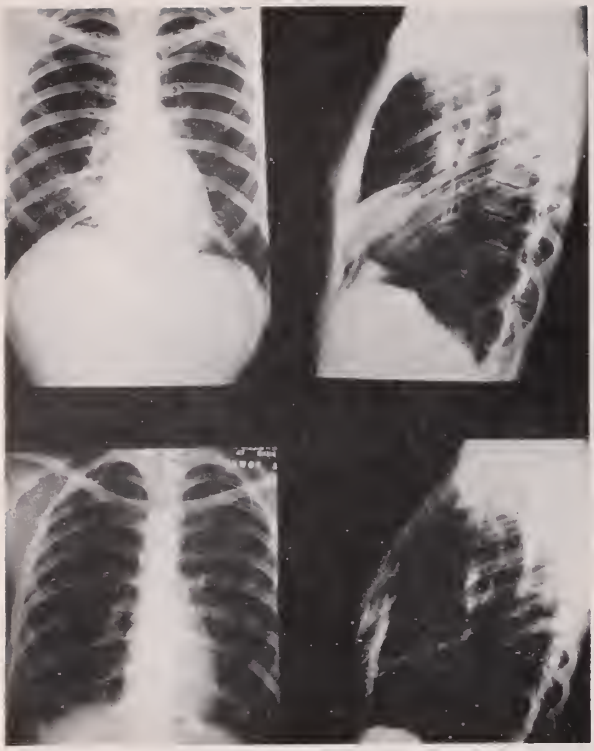


Fig. 5—Mid lobe atelectasis, symptoms of three months duration. The lower films were made two days following bronchoscopy and show clearing.

out routinely. Courses of the appropriate antibiotics were the mainstay in the nonoperated cases (Table 3).

Table 3

Right Mid Lobe Disease

27 Cases

Bronchoscopy	15	Positive Findings in	6
Bronchogram	13	Positive Findings	
		Bronchiectasis	9
		Obstruction	2
			11
Mid Lobe Resection	7	Atelectasis	5
		Bronchiectasis	1
		Abscess	1
			7

Follow up has been one to eight years. There have been no fatalities. In one operated case a bronchopleural fistula developed which necessitated a second operation. Those in whom x-ray findings disappeared following bronchoscopy have remained symptom free. The remainder have not been incapacitated but do have symptoms at intervals. It is particularly gratifying to those who have had symptoms for months to know that there is a basis for their illness which is neither tuberculosis nor cancer.

DISCUSSION

Brook's original paper dealt with the results of enlarged tuberculous nodes. One of our patients had active tuberculosis, one had received pneumothorax, and one gave a history of pleural effusion believed to have been tuberculous. Two of the three children tested were tuberculin negative. Of the adults who had calcific deposits and were tuberculin positive, there was no evidence of activity of the infection. The patient with the suppurative lung abscess had a calcified nodule in the mid lobe peripheral to the abscess which was a tuberculoma. The patients with symptoms of short duration who responded to conservative treatment were believed to have had non tuberculous infections.

Atelectasis of other lobes and segments does occur but seemingly with less frequency. We have recently seen a case of atelectasis of the anterior basal segment of the right lower lobe in an elderly woman following an acute pneumonitis which cleared. A second case was in a white boy, age 8, who had had episodes of wheeze and dyspnea since age 2, and in whom diagnoses of congenital heart defect and foreign body had been considered. On a lateral film, the first time this view had been obtained, a sharp atelectasis was seen out from the lower hilum. On exploratory the right lower lobe was found to be atelectatic, the right middle and right upper lobes inflating well. The lower lobe and adjacent nodes were excised. Microscopic studies showed a diffuse atelectasis and pneumonitis; the nodes were tuberculous and believed to represent part of a primary complex. A third case was of a 42 year old white woman who experienced moderately severe hemoptysis eight times in three years. Serial chest film, two bronchograms and two bronchoscopies gave no clue except that the bleeding was coming from the left lung. On thoracotomy the lingual segment of the left upper lobe was found to be atelectatic. Microscopic examination disclosed atelectasis, focal area of hemorrhage, and an excess of lymphoid tissue but no tuberculosis or malignancy. The lingular segment may be considered the counterpart of the right middle lobe and in this case a localized atelectasis was present not demonstrable by x-ray.

Middle lobe disease may result from other than infection. Halle and Cloutier[9] reported a case of foreign body in the lower third of the esophagus producing middle lobe syndrome. On thoracotomy a denture was removed from the lower third of the esophagus. The swelling and edema in the area of the mediastinum extended to the region of the hilum of the middle and lower lobes and several large lymph nodes were found pressing on the right middle lobe bronchus. Sarcoidosis was incriminated

in the case of Arkless[10], the diagnosis being made on the resected specimen.

Malignancy of the mid lobe is comparatively rare. Of 78 cases of obscure peripheral pulmonary lesions coming to surgery reported by Heiser[8], 55 were bronchogenic carcinoma, only one of these in the right middle lobe. Malignancy was not present in our 27 cases. We have no qualms about rejecting diagnostic thoracotomy in the elderly who have mid lobe disease because of the discomfort associated with such procedures and the notoriously poor results of excisional surgery in malignancy of the lung. If the surgery is for the control of hemorrhage or incapacitating illness the calculated risk is accepted.

CONCLUSIONS

1. Disease limited to the right middle lobe has been observed in 27 patients.
2. History and physical findings are non specific but do indicate that detailed diagnostic studies are warranted.
3. Resection of the middle lobe has proven effective in 7 cases when incapacitating symptoms persisted following conservative treatment.
4. Localized atelectasis may occur elsewhere but with less frequency.

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A New Medical Film

"The Metabolic Insufficiency Syndrome: Diagnosis and Treatment"—is now available from the Medical Film Center of Smith, Kline & French Laboratories. Particularly oriented towards the physician in general practice, it also is suitable for medical teaching.

A 16 mm. sound motion picture in full color, the 25-minute film reviews the processes of metabolism and describes the etiology and diagnosis of hypometabolism, whether due to subnormal activity of the thyroid gland itself (hypothyroidism) or faulty cellular utilization of the thyroid hormone (metabolic insufficiency). The clinical use of 'Cytomel', a new Smith, Kline & French Laboratories preparation designed for use in the treatment of hypometabolic states, is demonstrated in the film.

Prints of this film, as well as other medical motion pictures, are available on free loan to physicians and medical groups through SKF professional Service Representatives, or by writing: Medical Film Center, Smith, Kline & French Laboratories, Philadelphia 1, Pa. Four weeks' notice and an alternate showing date should be given whenever possible.

Malignant Melanoma

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INTENSIVE EFFORTS to establish the etiology of various kinds of malignant tumors have brought us closer to the discovery of the method of growth of many cancers. The unmistakable role of such factors as trauma, endocrine disturbances, and heredity are realized. And yet, there remains the serious problem of the tumor which, apparently benign in its incipiency, later becomes malignant. Examples of this are polyps of the intestinal tract and cervix, certain breast tumors, leukoplakic lesions and melanomas.

Although relatively rare, melanomas are recognized as being among the most highly malignant and most unpredictable of all types of cancer. Most people are vividly conscious of black moles, especially since every person has approximately 20 pigmented lesions scattered over the surface of the skin. Dermatologists and surgeons alike are constantly faced with the problem of what to do with so-called moles. Taking into consideration the rarity of malignant melanoma (approximately one case per 100,000 in the general population), it would be foolhardy to attempt to remove all pigmented skin lesions in order to prevent the formation of melanoma. However, one has only to treat an occasional patient with advanced melanoma to realize the gravity of this disease and to become somewhat gun-shy of moles. The decision therefore must be made as to which types of pigmented lesions one should remove.

One of the most confusing aspects of this problem is the nomenclature of pigmented skin lesions. It is a common practice to call all pigmented and or raised lesions of the skin "moles". It is my feeling that this should be discouraged and the various lesions should be designated more accurately from a pathologic standpoint. For example, senile keratoses, papillomas, epitheliomas, hemangiomas and neurofibromas ought not to be classified as moles. The term "nevus" is the one commonly applied to the benign pigmented lesion of the skin which is frequently seen and may be confused with or actually predispose toward melanoma, which itself is a name reserved for frankly malignant lesions. In selected instances nevi may become malignant, and it is our job to make the proper decision about removing these precancerous lesions. Unfortunately, the term "nevus" is derived from a Latin root meaning "mark" and consequently many different types of blemishes or skin lesions have fallen into the category of nevi. However, for the sake of clarity, the name "pigmented nevus" should be applied to pigmented growths composed of melanoblastic cells; the so-called "common mole" is a form of pigmented nevus. Since each individual has about 20 nevi and since the incidence of melanoma is 1:100,000 individuals, it is apparent that melanomas are rare and also uncommonly develop from nevi. Certain types of nevi never become malignant whereas others do. The following table will indicate the etiologic relationship of nevi to melanomas.

Type	Characteristics	?Change to Melanoma?
Dermal Nevus (Common mole)	Flesh colored to dark brown Flat or raised Often hairy	Never becomes a melanoma
Junction Nevus	Brown to dark black usually smooth and flat Hairless	Precursor to melanoma
Compound Nevus	May resemble both above types Hairless or may lose hair	Junctional element may develop into melanoma 1:10 arise from these
Blue Nevus	Brown to blue-black May be elevated Hairless	Benign Exceptionally rare malignant change

In selecting the nevi which ought to be removed prophylactically, certain factors must be considered:

1. Location (hands, feet, genitalia, mucosae)
2. Exposure to trauma
3. Change in character or appearance
4. Degree of pigmentation
5. Sudden growth
6. Endocrine influence (puberty, pregnancy)

All nevi which come under the influence of one or more of the above-listed factors ought to be removed and examined microscopically. In most cases, it is perfectly safe to excise nevi under local anesthesia, but prior to doing so a careful history and examination pertinent to the lesion should be obtained. If

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there is any question about the possibility of malignancy, I feel that general anesthesia should be employed so as to avoid the trauma of local infiltration of an anesthetic substance and limited excision of the lesion. Needless to say, careful pathologic examination is performed on all nevi which are removed.

Faced with the pathologic diagnosis of malignant melanoma, we then must proceed with the radical operation most suited for the location of the lesion. Melanoma differs from many malignancies in that its location varies from case to case, necessitating entirely different procedures in different areas of the body. In general, I believe that a prompt radical excision of the local area, together with radical regional node dissection is the operation of choice. On the extremities, back and abdomen, it may be possible after wide excision to close the wound, but in many instances a skin graft has to be used. In addition to the local area, Pack and others have recommended block excision of the skin and subcutaneous tissue between the local area and the regional lymph nodes, in conjunction with a radical regional node dissection. In lesions of the extremities, the question of amputation always arises. Here a philosophical question is raised, inasmuch as we would not hesitate to recommend radical amputation or quarterectomy if we could guarantee cure of the patient. On the other hand, one hesitates to do a hip joint, hind quarter, or interscapulo-thoracic amputation for melanoma unless the outlook for cure is very favorable. A crippling operation such as this, later followed by recurrence of the disease, would scarcely be worthwhile. Therefore, considering all of the factors involved, I have elected to excise widely all of the soft tissues around the local lesions and concurrently to perform a radical regional node dissection. This type of approach should give good results in proportion to the degree of node involvement, and more radical surgery will probably not increase the curability when node involvement is advanced.

At this point, I should like to summarize 10 cases, 9 of them coming within the past 8 years. Of the 10 cases, 4 are dead from melanoma, while the others have shown no evidence of metastases, varying from 5 months to over 3 years postoperatively.

Case #1 S. W. H., female, age 50. A "mole" had been present on the left forearm all of her life but suddenly had increased in size for about a year before she consulted her local doctor. Five days before admission to Stuart Circle Hospital, a biopsy was taken by her local doctor, and the remaining lesion was fulgurated. The pathology report was malignant melanoma, and she was then subjected to radical local excision and axillary gland dissection July 22, 1948. The skin defect was grafted on August 3, 1948. Subsequently, she developed pain in the hip and thigh and was re-admitted to the hospital four months later, but studies failed to reveal the cause for this pain. However, she died from generalized metastases January 6, 1949 (six months after radical excision of the area).

Case #2, H. K., male, age 40. A "mole" had been present on the anterior aspect of the right calf for about six or eight months and had grown to about the size of a dime and was slightly raised. It was excised under local anesthesia February 23, 1950, and was reported as malignant melanoma. After a four week interval to allow any potential cells in transit to lodge in the regional nodes, radical excision of the site of the lesion on the calf with skin grafting of the defect and radical popliteal and inguino-femoral node dissections were carried out on March 24, 1950. All tissues were reported as negative for residual tumor. 15 months later pigmented nodules appeared in the scar at the groin, and these were excised and reported as benign nevi. Further development of pigmented nodules occurred, and biopsy on October 4, 1951, indicated that these were recurrent malignant melanoma. Thereafter there was rapid development of skin nodules in the calf and thigh, and careful study revealed no spread above the level of the groin. Exploration for possible hip joint disarticulation was carried out on November 5, 1951, but at that time peri-aortic nodes were noted and were biopsied and showed metastatic melanoma; therefore, this operation was abandoned. Excision of multiple recurrences was performed on November 16, 1951, to prevent breakdown of these lesions, and he was given x-ray treatment to the leg and to the pituitary gland. Deterioration thereafter was rapid, and death occurred on February 18, 1952 (two years after excision of the original lesion).

Case #3, S. H. C., female, age 41. A non-pigmented lesion was excised from the left upper arm in 1947 and was reported as an amelanotic melanoma. Thereafter a surgeon excised this area widely, and the tissues were reported as negative for residual tumor. Five years later she was seen because of a mass in the left axilla, and on January 24, 1952, radical axillary gland dissection was performed. The pathologic examination indicated metastatic malignant melanoma. Because of headaches and dizzy spells she was studied thoroughly approxi-

mately 16 months later and was found to have cerebral metastases at craniotomy. She gradually failed and died April 29, 1954 (seven years after the removal of the original lesion and two years after radical axillary dissection).

Case #4, E. G., female, age 38. A "mole" was removed from the left lower leg in 1939 by a surgeon, and pathologic examination indicated a benign nevus. One year later she was seen because of a mass in the left groin which appeared to be a hematoma. This was needled by the patient, and on June 17, 1940, incised and drained by her local doctor. Because of hemorrhage she was admitted to the hospital, and biopsies were reported first as metastatic angiosarcoma, but later as metastatic melanoma. Subsequently, local recurrences developed in the lower leg at the site of the original lesion, and deterioration was rapid, and she died October 1940 (slightly over one year after the original lesion was removed).

The following cases are still living and well and are being closely followed.

Case #5 W. M. J., male, age 72. This elderly man had had a "mole" in the epigastrium for many years, but for several months it had increased in size and in elevation from the skin. Preoperatively, a diagnosis of probable melanoma was made, but because of complicating arteriosclerotic heart disease it was decided to limit the operation to excision of the local area. This was carried out under local anesthesia September 23, 1954, and at the present time, over two years postoperatively, he is alive and well, although there are some enlarged nodes in the left axilla.

Case #6, D. MacD., female, age 46. This patient had had many "moles" all of her life. One on the right upper arm had changed from brown to black in color about a year previously, and she pricked it with a pin following which there was sudden increase in size. The lesion was excised but no pathological examination carried out. Seven months later she developed a mass in the axilla, and biopsy of a gland was reported as showing metastatic melanoma. She was then referred for more radical surgery, and on July 28, 1953, radical axillary and supraclavicular node dissections were carried out. There was one black node in the supraclavicular fat which was reported as showing metastatic melanoma, but otherwise the tissues were negative for recurrence, and she is alive and well three and one-half years postoperatively.

Case #7, H. W. A., male, age 27. A brown spot had been present on his right thigh just above the knee all of his life. In the course of his work as a termite exterminator he scratched the area with a nail on several occasions following which there was growth in the lesion on the thigh. Glands became apparent in the groin two months before he was seen by me. One week before admission cautery excision of the lesion was performed by his local doctor, and pathological examination revealed malignant melanoma. Subsequently, radical resection of the local area combined with radical inguino-femoral node dissection was carried out May 7, 1955. The femoral glands were reported as showing metastatic melanoma, but the iliac glands were negative. He has been followed for over 17 months and is alive and well.

Case #8, H. J. W., male, age 35. A pigmented lesion on the left ear lobe which had been present for many years began growing slowly approximately one and one-half years ago. The patient was being followed by a dermatologist because of xeroderma pigmentosa, and this lesion was noted and was diagnosed pre-operatively as a melanoma. Excision of the area under general anesthesia was carried out January 27, 1956, and was reported as melanoma. Therefore, radical removal of the lower portion of the left ear and surrounding skin combined with radical neck dissection was carried out January 31, 1956. The resulting skin defect was grafted, and pathological examination indicated no evidence of residual tumor in the tissues examined. He has been followed nine months and is alive and well.

Case #9, M. A. W. M., female, age 34. This young woman has had a number of nevi for many years. A lesion in the region of the left mandible was removed under local anesthesia by another surgeon on May 11, 1956, and reported as malignant melanoma. She was then referred for radical surgery, and the local area was widely excised and radical neck dissection carried out May 17, 1956. The tissues were negative for residual or metastatic tumor, and the patient is alive and well five months postoperatively.

Case #10, R. M. F., female, age 48. This patient had had a carcinoma of the sigmoid which was resected January 12, 1950, from which there has been no evidence of recurrence or metastases. A red, raised skin lesion on the right forearm had been present for several months and was excised under local anesthesia March 22, 1956, and was surprisingly reported as malignant melanoma. Wide local

excision and radical axillary gland dissection were performed on March 29, 1956, and the tissues were negative for residual tumor. She is alive and well seven months postoperatively.

This is a small series of patients, some of whom have been followed only a short while after treatment, and yet it illustrates several important aspects of the disease. *Melanoma is a disease of adult life,* generally of the 4th and 5th decades, while death from melanoma before the age of puberty is practically unheard of. In this group of cases, the youngest patient was 27 and the oldest 72, with the mean age 43.

The influence of trauma is apparent in at least two patients. In one, the lesion began to grow suddenly after it was repeatedly scratched by a nail while he was working. The other patient pricked the lesion with a pin several times, thinking it to be a blood-blister, following which it grew rapidly. In several other cases, removal of the lesion with the electro-cautery or excision under local anesthesia was performed, and these procedures may have contributed to recurrence or spread of the disease.

The role of endocrine stimulation in the growth of melanomas is not brought out by this series of cases, but this is definitely an important consideration. Growth of pigmented lesions after puberty has been noted and therefore questionable lesions in children, at the moment harmless, should be removed prior to puberty. Furthermore, rapid growth of melanomas has been observed during pregnancy, suggesting here also an endocrinologic relationship.

In this group of 10 cases, there were 7 instances of melanoma in the extremities, 3 in the leg and 4 in the arm. One case involved the epigastric region, one the submandibular area of the neck, and one the ear lobe. In all these cases, extensive radical surgery including the regional lymph node areas was possible, and this is the only effective type of therapy in melanoma. X-ray therapy was given in the terminal stages to two patients, without appreciable alteration of their course. *The location of the lesion* in this series is characteristic of the disease, occurring most frequently in the extremities, and as previously mentioned, selection of the proper operation must be individualized for each case.

Although *lymph node involvement is a bad prognostic sign,* as it is in other forms of cancer, in melanoma death from widespread local and general dissemination often occurs when the regional nodes are reported as uninvolved. Conversely, in some instances when nodes are selectively involved, the subsequent course may be surprisingly favorable. Recurrence or metastasis may occur soon after operation, or infrequently the disease may reappear several years later. It would seem that melanomas are tumors which from the outset are malignant and for the varying periods of time are held in a quiescent state before becoming widely disseminated. They are indeed most unpredictable.

In conclusion, I would like to reiterate several points concerning malignant melanoma. One must be "mole-conscious" and must examine each pigmented lesion most carefully. Those lesions which are thought to be benign but which might be subject to trauma can safely be removed under local anesthesia. Whenever melanoma is suspected, the safest procedure is to remove the lesion under general anesthesia, and if pathologic examination indicates malignancy, wide excision of the local area combined with radical regional node dissection is imperative. In certain cases, amputation may be necessary but should be recommended only after careful consideration. Spread of recurrent and metastatic melanoma is extraordinarily rapid and distressing, and it emphasizes the grave nature of this type of malignant disease. A personal series of 10 cases has been reviewed and discussed.

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805 West Franklin Street
Richmond, Virginia

Do you know that every 4 minutes someone is saved from cancer? This means that 150,000 Americans will be saved from cancer this year. (One out of every 3 cancer sufferers)

Excessive Operative Bleeding

Evaluation and Management

HENRY G. KUPFER, M.D.
Richmond, Virginia

THE FIELD OF SURGERY has developed and broadened in the last decade to the extent that operations which are now performed by a skilled surgeon would have been considered impossible ten years ago. Such operations burden, and at time exhaust, many systems of the patient's organism—among them the coagulation system. Hence, it is fortunate that our knowledge in the field of coagulation has surged equally in the past decade, and as usual in such cases, newly proven facts have resulted in a more complex theory of the working mechanism of human blood coagulation. Many new prophylactic and therapeutic measures have been found to be helpful in this field.

It is my aim to bring out some diagnostic approaches which could be used in the operating room and help you decide as to the cause and therapy of bleeding in the operated patients without the help of a specialized laboratory. Recognition of a potential bleeder may also be done with a few simple tests before the planned operation.

The congenital bleeder who has a history of easy bruising and bleeding even after minor cuts rarely is a cause of unexpected operative bleeding. Such a patient is not operated upon without full diagnosis and is properly prepared for operation by replacement of the missing coagulation factors. The mild bleeder whose many clotting factors are scant, but sufficient for daily needs, bleeds when exposed to an operative trauma. Fortunately, most of these patients have a family history of bleeding after operations. Nevertheless they remain a threat even if rarely encountered.

Among the acquired causes of operative bleeding, excessive fibrinolysis is of major importance. Fibrinolysin is a proteolytic enzyme normally active in the removal of clotted blood after a repair of the damaged tissue is accomplished. It is found to be increased in a number of disturbances like anesthesia, shock, hemorrhage, anoxia, carcinoma of prostate, lungs or stomach[2], severe burns, incompatible blood transfusions and after operations on organs rich in thromboplastic and proteolytic enzymes like lungs, uterus, prostate and pancreas[4]. Fibrinolysin was found to be increased in mental distress, in anxiety states, severe exercise, after injection of adrenalin[1], and even by alarming suggestion under hypnosis[10] This enzyme destroys not only fibrinogen and fibren but also many other protein components partaking in the blood coagulation like prothrombin, accelerin (Factor V), Convertin (Factor VII) and others.

The use of massive amounts of stored blood with few or no viable platelets may lead to a dilution of the original number of platelets and result in a platelet deficit. The amount of blood given and the time during which it is administered is of paramount importance. Krevan and Jackson[5] found that four patients out of thirteen who received 1 to 9 pints of stored blood showed thrombocytopenia below 100,000 cu.mm., while all fourteen who received from 10 to 40 pints in 48 hours developed significant thrombocytopenia and generalized bleeding. All had some degree of shock and two of the fourteen survived the operation.

It is known that transfusion of whole blood, plasma or serum into normal individuals causes a temporary thrombocytopenia for a period of 1 to 2 days[6] due a thrombocytopenic factor present in normal blood. The use of large amounts of the plasma expander Dextran is also followed by a thrombocytopenia. Thrombocytopenia may be exaggerated in some cases by the possible incompatibility of platelets resulting in iso-agglutination and lysis of these cells[11].

The probability of intoxication with citric acid used as anticoagulant in stored blood has been debated for many years. Patients with a well functioning liver are able to metabolize in one passage through the liver amounts of citric acid 100 times higher than normal[9]. On the contrary, patients with liver disease showed an elevation of blood citric acid even after small blood transfusions[7,8]. Citric

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acid levels found in blood of such patients by Bunker, et al[7], are more than sufficient to bind all available ionized calcium. In addition, potassium leaks out from stored erythrocytes, and increases fourfold the plasma potassium level in blood stored for 21 days. Both of these factors, decrease of ionized calcium and increase of potassium, are responsible for a number of cases of sudden hypotension and cardiac arrest during operations. Howland, et al[9], account for 22 cases of sudden death due to cardiac arrest in 130 patients who underwent radical surgical resections of malignant tumors, and who received more than 10 pints of blood during the operation. The electrocardiographic examination showed patterns of ventricular fibrillation or cardiac asystole causing cardiac arrest.

Time best spent on prophylaxis of excessive operative bleeding is that used for taking a thorough history. This may help to differentiate bleeding due to local causes from a generalized bleeding tendency. Personal and family history of spontaneous or unexplained excessive operative bleeding will put the surgeon, otolaryngologist or obstetrician on guard, and save both the patient and physician many an unpleasant, yet avoidable, experience. Normal results of bleeding and clotting time performed routinely do not eliminate the possibility of a clotting disturbance. One can name a number of conditions causing excessive operative bleeding where the bleeding and clotting times determined pre-operatively are usually normal.

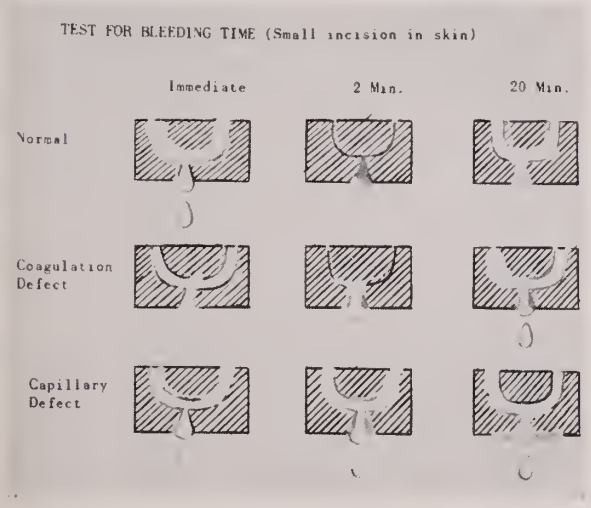


Fig. 1

One of the most frequently used but not fully interpreted tests is the bleeding time. This figure shows how the observation of bleeding after a stab in the ear lobe will indicate the presence of vascular defect, coagulation defect, or both.

A suspected bleeding condition may be recognized in a great majority of cases with the use of these few simple tests outlined in the following self-explanatory figure.

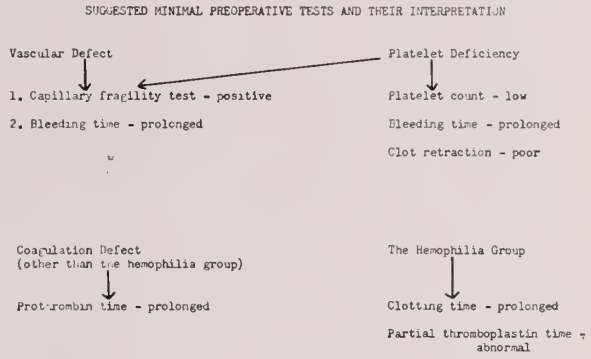


Fig. 2

A normal capillary fragility test and bleeding time virtually eliminates a vascular defect, as well as a clinically significant platelet deficiency. The latter will be, in addition, well estimated by an examination of a stained blood smear, platelet count or clot retraction. Normal one-stage prothrombin, as performed in most laboratories, indicates the absence of any marked deficiency or prothrombin, accelerin or labile factor (Factor V), convertin or stable factor (Factor VII) and fibrinogen. Each of these components can be estimated individually in a specialized laboratory. The bleeding diseases which belong to the hemophilia group are most difficult to diagnose, especially when present in a mild form without a typical history. Prolonged clotting time done by the Lee-White method and the reliable and simple screening test—partial thromboplastin time will help to place the deficiency in the hemophilia group. Individual entities comprising this group can be recognized with special tests and treated according to the type of deficiency.

All patients known to have a bleeding disorder should be fully classified and the kind and degree of deficiency estimated. They can be prepared for an operative intervention by the estimation of the duration and degree of response to a practical replacement of the deficient clotting component. Unfortunately, there are rare cases, where in spite of all tests giving normal results and a negative history, patients may develop excessive bleeding during the operation. These may be due to a number of precipitating factors, many of which are connected with the surgical intervention.

The evaluation of the bleeding disorder which occurred during the operation is obviously done under quite different conditions. One must use rapid, simple

and reliable methods which will indicate broadly the kind of deficiency, but be precise in the necessary therapy.

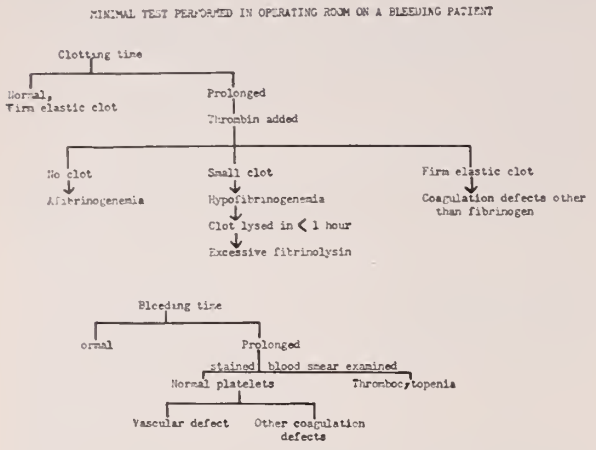


Fig. 3

As seen on this figure, this may be accomplished by performing the clotting time, the estimation of bleeding time and staining a blood smear. Obviously, one cannot evaluate all disturbances of this complicated system by these few tests, and there will be some situations where more complete studies will be necessary, but generally, we have found these tests satisfactory for rapid evaluation of the therapy necessary for the bleeding patient.

Normally, the blood will clot in 5-10 minutes and the clot retract in one-half to one hour, as a firm elastic string. In cases of prolonged clotting time, we recommend the addition to one test tube with blood a "pinch" of topical thrombin to be found in operating rooms. Absence of clotting after a few minutes is diagnostic of afibrinogenemia—a small clot formed on the bottom of the test tube or a soft friable clot is typical of hypo-fibrinogenemia. A firm, elastic clot formed after the addition of thrombin indicates the deficiency of some of the coagulation factors other than fibrinogen. Fibrinolysin may be suspected as causing fibrinogenopenia in any case where the clot will lyse in one hour or less after coagulation[11].

Bleeding time prolonged over five minutes indicates a vascular defect when the clotting time is normal, and frequently a thrombocytopenia, when the clotting time is reversed to normal by the addition of thrombin. This may be confirmed by an evaluation of the number of platelets on the stained blood smear.

One might expect a generalized bleeding tendency in certain disease conditions. Operations on the heart for a congenital malformation is one of these, especially when accompanied by a secondary polycythemia.

The patient whose data is presented in this chart shows basically normal findings except for a high hematocrit. The large mass of red cells cannot form a solid clot with the normal number of platelets and fibrinogen. Bleeding in such cases is due to relative hypofibrinogenemia and thrombocytopenia. These are readily corrected before the operation by repeated venesections, centrifuging of the patient's blood and transfusing with his own plasma until the hematocrit is brought to normal.

Patients with liver diseases and portal hypertension may easily become dangerous bleeders because of decreased formation of some of the clotting proteins in the liver, as well as proneness to citric acid intoxication.

The treatment of operative bleeding can be best assured by having a pint of fresh blood ready for each patient suspected of bleeding excessively. This should be given at the first sign of generalized oozing. Fresh blood will supply viable platelets, and a pint of it should be administered after transfusions of 3-4 pints of stored blood in order to avoid thrombocytopenia due to dilution of patient's platelets.

R.B.G. — Congenital Heart Condition—Secondary Polycythemia

	4-23-53	After venesections and plasma transfusions	5-4-53	After operation	6-7-54
Hgh/gm%	25		21.5		14.8
RBC/mil.	9,350		6,680		5,490
WBC	8,000		9,400		7,550
Hematocrit/%	77		60		47
Platelet Count/cu.mm.	327		322		257
Platelets/thous. RBC	30		40		47
Bleeding time/min.	3		2		2
Clotting time/min.	8		10		8
Clot retraction	poor in 24 hr.		fair in 1 hr.		good in 30 min.
Prothrombin/%	100		100		100
Fibrinogen/mg% in plasma	244		226		213
Fibrinogen/mg% in whole blood	56		89		112
Capillary fragility	positive		negative		negative

Fig. 4

If at all possible, transfusions should be given slowly. According to Clifton et al[4], diffuse oozing was observed in all cases when transfusions were given at a speed of more than 1000 cc. per hour.

Therapy of afibrinogenemia due to fibrinolysis should consist of removal of precipitating factors listed before; intravenous injection of 4-8 grams of human fibrinogen in a single dose rather than in less effective multiple small doses, and fresh blood transfusions to prevent shock and supply other clotting components commonly decreased in these cases. Injections of ACTH and Cortisone help in such cases probably by increasing anti-fibrinolysin. These hormones are also effective in the improvement of the integrity of the vascular tree and may reduce the severity of bleeding due to a vascular deficiency.

Whenever large amounts of stored blood are transfused, especially into patients with impairment of liver functions, the possibility of citric acid intoxication must be recognized. This may be prevented by intravenous injection of approximately 1 gram of Calcium gluconate after each 1000 cc of blood transfused.

This outline of the problem of excessive bleeding during operation is presented as seen by a non-surgeon "coagulationist", who would be satisfied if some of the suggestions woull be considered worthwhile by you—surgeons who must calmly face any such unexpected situations.

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Let's Reminisce!

In a case of "Remarkable Recovery from a Pistol Shot Wound of the Right Ilium", reported at the annual meeting of The Medical Society of Virginia in 1873, the following statement was made: "I have not seen Mr. J. M. P. since my last visit (April) but am happy to state, as I am informed, that from *spectral tenacity,* he has grown up to his full standard; weighs 180; better health than ever; wound entirely *healed,* and can walk with his cane with comparative ease. All this after being confined to his bed for five months; drinking, in the meantime, over sixteen gallons of Grayson county's best whiskey and brandy, and losing, by suppuration alone *thirteen gallons pus.*

Cystic Fibrosis of the Pancreas

Complicated by Myocardial Fibrosis

LEON W. POWELL, JR., M.D.
SAMUEL NEWMAN, M.D.
JOHN W. HOOKER, M.D.
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CYSTIC FIBROSIS of the pancreas has an estimated incidence of one case in one thousand live births.[1] The cystic, fibrotic changes in the pancreas are usually associated with a chronically infected lung lesion, and clinical manifestations are varied. Cor pulmonale is an occasional complication of advanced pulmonary lesions in this disease.[2]

The following case of fibrocystic disease of the pancreas developed congestive heart failure because of extensive degenerative and fibrous changes in the myocardium. Only three other cases with similar myocardial lesions were found in the literature. In one of these cases, the heart lesions were described as similar to those of beriberi.[3]

CASE REPORT

This 2½-year-old male child was admitted to The Memorial Hospital for the last time, 10-22-55, with pallor and generalized edema.

Family History. The child's mother and father were living and in good health. One sister, 9 years old, is living and well. A second sister died suddenly at the age of 4½ years. She had apparently been in good health until three days prior to death.

Past History. The child was born March 17, 1953, and weighed 4 pounds 8 ounces. On May 12, 1953, at nine weeks, the child weighed 5 pounds 5 ounces. The nutrition was described as extremely poor. The child entered The Memorial Hospital for the first time on May 25, 1953, because of diarrhea. He was two months old and weighed 5 pounds 10 ounces. The child had been having loose stools since birth, but in the past three weeks before admission, the stools had been green and very offensive in odor. Twenty-four hours before admission, there had been six to eight loose green bowel movements. On physical examination, the child was a small, malnourished, premature infant with a general appearance suggesting starvation and wasting but not dehydration. The EENT examination revealed a mildly red pharynx. The heart presented a systolic murmur over the base. No rales were heard in the lungs. The abdomen revealed no masses. During this admission, the hemoglobin was 8.9 grams; rbc 2,900,000; wbc 8,540 with 1 band, 25 segs, 69 lymphs, 3 monos, 2 eosinophils. An x-ray of the chest was essentially normal. The child was treated with glucosulfadiazine. The child was discharged the following day, May 26, 1953, on iron therapy. The parents were given instructions about feeding the infant properly.

At four months of age, the child was hospitalized in another city. There gelatin tests for stool trypsin and studies on duodenal drainage showed the absence of pancreatic enzymes. This finding along with the history and physical examination established the diagnosis of cystic fibrosis of the pancreas. At the time, there were no signs of pulmonary infection. The child was discharged on one-quarter teaspoon pancreatic granules three times a day plus a formula and poly-vitamin drops.

During the next 24 months, the patient was not heard from.

On July 20, 1955, at age 28 months, the child was seen because of a cough. The child looked very pale. A chest x-ray revealed an increase in the bronchovascular markings. The hemoglobin was 46% and 100 cc. of whole blood were given.

Present Illness. On October 22, 1955, at age two years, seven months, the child was admitted to The Memorial Hospital. He weighed 20 pounds 2 ounces and was very pale. The hands and feet were cold and there was generalized edema and a weak pulse. An x-ray of the chest revealed a slight increase in bronchovascular markings with questionable enlargement of the heart to the left. On admission, the temperature was normal, but on the following day, 10-23-55, the temperature rose to 101.5°. On 10-24-55, it fell to 99.4°. The hemoglobin was 10.7; rbc 3,800,000; wbc 13,350 with 1 band, 66 segs, 33 lymphs. There was oliguria, but one urine ex-

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amination revealed no albumin or abnormal sediment. The child was somnolent, and his condition seemed poor. On 10-24,55, the child vomited immediately after breakfast and expired.

The final clinical impression was cystic fibrosis of the pancreas.

AUTOPSY FINDINGS

External Examination. The body was that of a baby boy, 2 years, 7 months old, which weighed 22 pounds and measured 30.5 inches long. The skin was tense, dry and very pale, the legs were moderately edematous.

Internal Examination. Each chest cavity contained 70-80 cc of amber colored watery fluid. The pericardium contained 20 cc. of fluid but the peritoneum was dry.

Heart. The heart weighed 50 grams and was dilated. The epicardium was smooth and contained a moderate amount of fat. The myocardium was pale brown and showed focal areas of dense white scar tissue in the left ventricle.

These areas were scattered through the myocardium but were more prominent near the base of the heart. The coronary vessels and the valves were within normal limits. The endocardium was smooth.

Lungs. The right lung weighed 70 grams and the left lung 60 grams. Both presented gray brown surfaces with moderate congestion and atelectasis of the lower lobes. There was a muco-purulent exudate in the small radicals of the bronchi.

Spleen. This weighed 30 grams. It had a dark red congested bloody parenchyma and a tense capsule.

Liver. The liver weighed 200 grams. The capsule was smooth and pale brown. The cut surface was pale tan and had a fatty appearance.

Pancreas. The pancreas appeared atrophic, fibrotic and partly infiltrated with fat. No normal pancreatic tissue was seen grossly.

Lymph Nodes. The lymph nodes of the mediastinum and the mesentery were enlarged, edematous and pale gray.

The remaining organs showed no pathologic changes grossly.

MICROSCOPIC EXAMINATION

Heart. There were large patchy areas in the myocardium in which muscle fibers were replaced by fibroblasts, fibrous connective tissue, capillaries and a few scattered lymphocytes. Occasional plasma cells, macrophages and eosinophils were seen. The process appeared to be a gradual dropping out of muscle fibers and their replacements by fibrous tissue. Several of the muscle fibers in and around the areas of fibrosis showed swelling of the sarcoplasm and nucleus. This degenerative change was most prominent in the left ventricle, although the right ventricle was also involved. The auricles were spared.

In a few foci the areas of fibrosis extended nearly through the entire thickness of the left ventricle. Special stains revealed no fungi or bacteria in the sections.

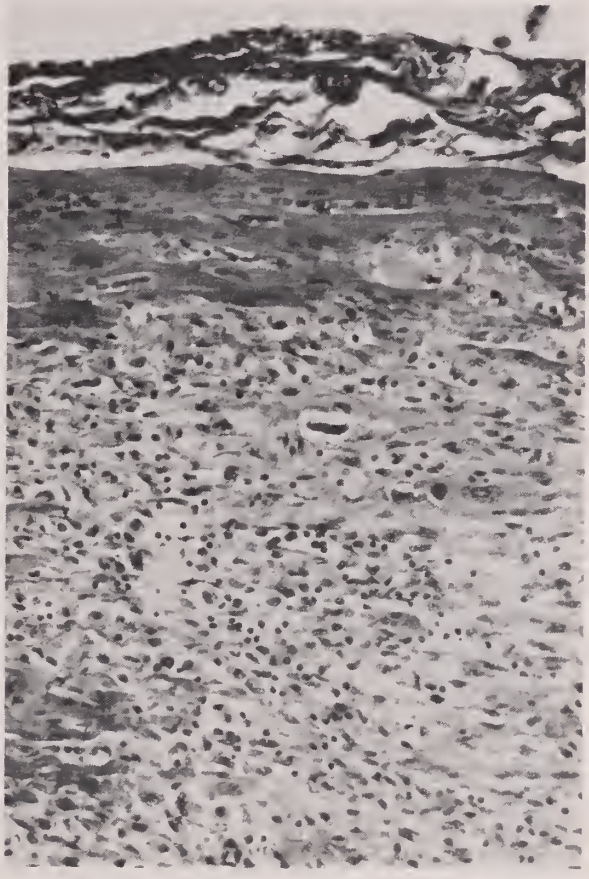


Fig. 1—Photomicrograph of left ventricle (about 100 x) showing epicardium and a few intact myocardial fibers above, with a large pale area of degeneration below. Occupying this damaged area are fibroblasts, a few hydropic swollen myocardial fibers and scattered lymphocytes.

Lungs. The sections showed moderate peribronchial fibrosis with some lymphocytic infiltration. There was a muco-purulent exudate containing segmented neutrophils in the smaller bronchi. Most of the lung parenchyma was aerated, but the vessels were congested and there were patches of atelectasis.

Spleen. This showed acute congestion.

Liver. Sections of the liver exhibited severe fatty metamorphosis.

Pancreas. The pancreas showed dilatation of many of the small ducts with atrophy and compression of ductal epithelium. There was inspissated material in many of the ducts and acini. The acinar epithelium was also compressed by acinar dilation and surrounding fibrosis, and there was moderate lymphocytic infiltration. Much of the pancreatic parenchyma was replaced by fibrous tissue. The islets of Langerhans were not affected.

Aside from congestion, the remaining organs showed no remarkable pathologic changes.

The autopsy diagnoses were: cystic fibrosis of the pancreas with chronic bronchitis, fatty metamorphosis of the liver and myocardial fibrosis.

The death was thought to be caused by congestive heart failure as a result of the myocardial fibrosis.

DISCUSSION

Apparently, the first case associating myocardial fibrosis with cystic fibrosis of the pancreas was mentioned in 1945 by Wissler and Zollinger in a child 8 months old.[4]

A similar case of cystic fibrosis of the pancreas was reported by Kintzen in a girl 18 months old.[3] At age 15 months, she weighed 6530 grams. There was severe dyspnea and a bad cough aggravated by activity. Examination revealed circumoral cyanosis, enlarged lymph nodes, a liver 2.5 cm. below the costal margin and a palpable spleen. There were rales in the lungs, and the heart was enlarged to the left. The heart action was normal and the tone clear. A chest x-ray showed the heart slightly enlarged to the left. There was infiltration of the right middle lung field with enlarged hilar nodes. The child expired at 18 months. At that time, she weighed 7150 grams. The heart weighed 85 grams and was dilated. Microscopically, the heart muscle fibers in several areas were pushed apart by interstitial edema. This edema was associated with swelling of the collegan fibers. Other muscle fibers exhibited hydropic degeneration and sarcolysis. In these areas, the muscle fibers looked like empty tubes and the nuclei appeared suspended in space. There was a marked infiltration of fibroblasts, moderate enlargement of muscle cells and slight infiltration of lymphocytes, plasma cells, eosinophils and neutrophils. The inflammatory infiltrate was apparently rapidly replaced by scar tissues. Kintzen considered the above description to fit that recorded by Durch and Wenckebach in beriberi. The myocardial lesions were considered to be the cause of death.

It is interesting that a case of cystic fibrosis of the pancreas described by Feer was accompanied not only by myocardial damage, but also by xerophthalmia.[5] The xerophthalmia responded completely to Vitamin A therapy, but the child expired of heart failure at 7 months of age. At post-mortem examination, myocardial lesions similar to those described by Kintzen were found. The heart lesions were considered responsible for the child's death in this case, too.

The etiology of the myocardial damage in our case was obscure; however, thiamine deficiency was a possibility which was considered. In theory, absorption of the water soluble vitamins should be relatively unimpaired in pancreatic insufficiency.[1] However, this child was from a low income, farm family and dietary intake was probably inadequate. The fatty liver was mute evidence in support of this assumption. The parents had to be reminded about proper nutrition for the child on several occasions. In addition, the pulmonary infection may have increased his requirements for thiamine. The heart lesions in this case were quite similar to those described by Kintzen as compatible with beriberi.

However, it should be emphasized that in human beriberi, little in the way of specific lesions has been found in the myocardium. Wenckebach described sarcolysis, swollen muscle fibers, edema between the cells and around the vessels.[6] He considered hydropic or vacuolar degeneration a characteristic finding. Hydropic degeneration and interstitial edema were also found in cases of beriberi heart disease by Weiss and Wilkins.[7] Yet these authors pointed out that such changes occurred in other conditions and were not specific for beriberi.

Neverthless, extensive heart lesions have been found in experimental thiamine deficiency in animals. In thiamine-deficient swine, Follis described necrosis of myocardial fibers, either focal or diffuse, which was sometimes visible grossly. These areas of necrosis were found in both auricles and ventricles.[8] At first, the muscle cells showed loss of striations accompanied by vacuolation and hyalinization of the myofibrils. Leukocytes then appeared. Long-standing thiamine-deficient diets produced areas of myocardial fibrosis.

Rinehart and Greenberg described two types of changes in the myocardium of thiamine-deficient Rhesus monkeys.[9] One type was a focal necrosis of heart muscle of variable extent. It appeared to be a slow degeneration of muscle fibers rather than acute necrosis. The reticular stromal cells showed a reactive hyperplasia and there was leukocytic in-

filtration. The other type lesion was thought to be more distinctive of thiamine deficiency and consisted of the formation of large clear areas in the cytoplasm of subendocardial muscle fibers accompanied by hypertrophy and hyperchromatism of the associated nuclei. There was also some interstitial edema. The lesion was most frequently seen in the left ventricle. These authors felt that the "hydropic degeneration" of the conduction fibers was distinctive for beriberi.

We agree with Weiss and Wilkins that the classical hydropic degeneration of muscle fibers is certainly not specific for beriberi. It is frequently observed in long-standing coronary artery disease, for example. However, the severe patchy myocardial degeneration and fibrosis present in our case is somewhat similar to that observed in thiamine deficient animals.

Although thiamine deficiency seemed to be a distinct possibility as the cause of the myocardial damage in the present case, other etiologic agents were considered. Potassium deficiency has been seen to produce lesions in the hearts of experimental animals indistinguishable from those of thiamine deficiency.[8] These lesions consisted of areas of focal necrosis with macrophagic and fibroblastic proliferation. Lymphocytic infiltration was also present. Similar heart changes have been described in humans with severe potassium deficiency.[10] However, the "hydropic degeneration" of the subendocardial fibers as seen in human beriberi was not present. Unfortunately, no potassium determination was done in our case.

We also considered fungal, bacterial, viral and non-specific myocarditis as possible causes of the myocardial fibrosis. Certainly myocarditis could not be completely ruled out, but the histological evidence was against it. The processes of degeneration and fibrosis were marked, yet the inflammation was quite minimal. Indeed, swollen, hydropic myocardial fibers were seen in areas where inflammatory cells were absent. In addition, no organisms were seen in the sections.

However, until more cases of a similar nature are observed and recorded, we can only speculate as to the etiology of the myocardial fibrosis in this child. This case does point out that cor pulmonale is certainly not the only cause of heart failure in children with cystic fibrosis of the pancreas.

SUMMARY

A case of fibrocystic disease of the pancreas complicated by myocardial degeneration and fibrosis is reported. Only three similar cases were found in the literature. The possible relation of the myocardial lesions to thiamine deficiency is discussed.

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Virginia Study On Chronic Illness

A Preliminary Report

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INTEREST in chronic disease has been evidenced by the Legislature in that they have made some money available to study the problem. A sum of $17,500 was appropriated. This followed a Virginia Advisory Legislative Committee recommendation to establish not less than five pilot clinics to determine the best means and methods to approach the situation. More will be said about the financial situation later.

In keeping with the mandate of the Legislature, two general medical or chronic disease clinics have been established as demonstrations in Dinwiddie and Russell Counties. The one in Russell has been operating for some time, the one in Dinwiddie recently established, and a third is proposed to be undertaken in another geographic area of the state during the present fiscal year. This area is yet to be determined.

In carrying out the study, the term pilot or demonstration has been used. What do we expect or hope to demonstrate?

1. To determine the extent of the problem of chronic disease among low income groups in average areas in Virginia. To discover the facts as to the health status of the indigent population and their medical needs.
2. To learn what can be done to coordinate efforts for better service to these individuals with an approach to pooled facilities.
3. To provide more readily for the purchase of laboratory and other facilities now available through devious means, or not available at all.
4. To prevent duplication of services thus promoting economy of public funds.
5. To serve as a screening device to expedite referrals to specific, special services now available.
6. To determine if a type of local out-patient service can be developed that may make it possible to apply more preventive measures and less hospitalization at public expense.
7. To emphasize rehabilitation when indicated.
8. To make the general public more conscious of these problems.

Now that reasons for the demonstrations have been given, it may be well to give briefly some of the main features of how the pilot studies are being conducted.

These, like all other health department clinics, have been established in the local health center in conformity with certain well-established principles. There is a plan prepared in writing by the local health director with assistance from local groups. Although tailored to suit local situations, both plans now in operation carry out certain principles. In general, these require approval by the local medical profession with assurance of their participation, the understanding of representatives of the official and non-official agencies that may be involved, agreement on eligibility and administrative policies, and an outline of the procedures to be followed. It has been the general belief of the agencies involved locally that it is best to concentrate efforts on known welfare clients in the beginning. The local health director acts as overall director of the clinic, local physicians serve on a rotating basis as clinicians; the clinic is held in the health center with public health nurses, clerical, and other facilities of the local health center being utilized. The health department clerk maintains the appointment register. A maximum of 3 new and 7 old patients are scheduled for each clinic session. Clinics are started on a twice-monthly basis and increased to a weekly schedule when indicated. Complete records are maintained on each patient. These are designed for transfer to punch cards for future statistical studies. This is regarded as necessary to give definite data on the incidence of disease, the evaluation of means and methods of treatment, and the cost of these procedures.

Only those laboratory studies, such as are avail-

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able in the average physician's office, are attempted in the clinic. Arrangements are made locally for the purchase from nearby facilities, such as the nearest hospital, for x-ray, laboratory, electrocardiograms, basal metabolism tests and other diagnostic procedures as may be recommended by the clinician. Such services are paid for at the prevailing rate for clinic patients. The cost of drugs is borne by the local Welfare Department. Patients are given return appointments on a basis somewhat similar to any good out-patient clinic service. Referrals are made to other services as indicated. This includes: Orthopedic, Rheumatic Fever, Maternal and Child Health, Tuberculosis, Rehabilitation, Seizure Control and and other established local or regional clinic services.

Patients may be referred with the approval of the health director for public health nursing supervision in the home, when such is indicated, on the same basis as any other public health nursing home visit is presently being made. The service does not include home visits by the clinic physician or office visits by the patient to a physician's private office, nor does it include routine bedside nursing by a public health nurse. Emergency medical or surgical conditions cannot be handled normally through the general medical clinic, but an attempt is made to use this clinic as far as is practicable to screen patients before referring them under state and local and similar hospitalization programs.

Reference has been made to the appropriation of $17,500 to establish not less than five clinics for study. The sum of $17,500 is not sufficient to operate three clinics even on the most frugal budget. Each of the two clinics in operation has required an addition of $7200 annually to the budget of the local health department. This provides for the salary and travel of one additional public health nurse in each location, payment of a reasonable honorarium to each local physician serving in the clinic, and for such essentials as the purchase of necessary laboratory, x-ray and other diagnostic aids. Although the localities participate financially in the operation of their local health departments, they understand that they are not to be asked to share in the cost of these studies until their value can be demonstrated.

Several observations may be made from present experience, though limited. It is believed that the term "chronic disease" imposes a psychological barrier in attempting to develop interest in the type of care proposed. After a clinic has been in operation and those concerned recognize what is being done, this obstacle apparently is diminished. Perhaps the term "general medical clinic" has more meaning to the average person, including the local medical profession. In our experience, this type of clinic has been the most difficult of all clinics to establish. This is probably due to the fact that it involves more people and more diversified interests than any other type of clinic.

The establishment of each of the two demonstration clinics now in operation has required a considerable amount of repeated explanation locally to secure the understanding, coordination and cooperation of local physicians, the Health Department, Welfare Department, Rehabilitation Service, Board of Supervisors, Board of Public Welfare and other interested voluntary agencies. Certain benefits are evident. The various agencies involved locally in the counties with the two demonstration clinics are apparently working together with a greater understanding of how each may work with and complement the efforts of the other. This by-product alone is believed to be worth a great deal.

It is felt that future reports may prove the value of this study.

Blanton Building
Richmond, Virginia

Don't forget the dates of the Annual Meeting of The Medical Society of Virginia—October 27-30—at The Shoreham, Washington, D.C.

Problems of Our Senior Citizens

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TODAY, we are meeting to discuss the problem of our senior citizens. Suddenly, we have awakened to the realization that this group constitutes a challenge to society.

Over a year ago, the Council on Medical Service of the American Medical Association set up a Committee on Geriatrics, to concern themselves with this area, hoping to stimulate an awareness of the magnitude of the problem, particularly on the part of the medical profession. One might wonder why the committee which was first activated under the name of Geriatrics Committee asked to have its name changed to the Committee on Aging. Geriatrics to many connotes those who have one foot in the grave, while aging starts at conception and continues on until death. Therefore, to really tackle this question, it is necessary to start out with the conception that study, research and action must take into consideration the entire life of an individual, including psychological, mental and physical factors which may affect and accelerate the process of aging. The Committee on Aging of the A.M.A. has set its sights with the following objectives in mind:

1. To explore problems concerned with the medical, biological, psychological, and social aspects of aging;
2. To collect data concerning energy maintenance, fatigue control, and the preservation of specific motivation;
3. To promote research in these areas;
4. To inform the medical profession of the availability of information regarding the aging processes;
5. To stimulate medical society interest in the problems of the aging; and
6. To impress upon the practicing physician the important role he can play by assuming community leadership to enrich the lives of older citizens.

The latest figures indicate that there are now 14,500,000 people in this country who are over 65 years of age. The rate of increase in this figure in older people is twice that of the rate of increase in the general population. By 1965, by present estimates, there will be 25,000,000 people over 65 in this country. By 1980 40%—75,000,000 of our population will be over 45, and what a political pressure group this can turn out to be! Of the 75,000,000, 20,000,000 will have some involvement of the cardiovascular system, 12,000,000 to 14,000,000 will have arthritis, and 20,000,000 some type of mental disturbance. To take care of the medical needs of these people will require sound thinking and action on the part of the medical profession and allied groups. Facilities, such as general hospitals, convalescent homes, nurses units, and chronic disease hospitals, will have to be improved, expanded and coordinated. The necessary personnel to develop this care will also have to be provided in some way or other. I will not go into this at any length because speakers who follow me will further elucidate this facet of the problem.

The Committee on Aging recently sent out a questionnaire which indicated some lack of concern on the part of state and local medical societies on this question. Only 34 of 48 states replied, and 70.8 per cent of these 34 have no committee in this sphere. The county medical societies appeared in a little better light, 45 of 84 replying, stating that 71.2 per cent had geriatrics committees. What is the importance of these figures? To me, it seems obvious that the magnitude and seriousness of this problem has not filtered down to any extent to the levels where its recognition is of such great importance. If those who must deal directly with many of the ravages which result from the aging process are not yet concerned, imagine the lack of knowledge of the general population. The opportunities in the field of education of the public and of the medical profession are limitless. After all, unless we do face up to the issues presented by this group, their impact on our social and economic structure in the near future may well be quite serious. Can we absorb the care and support of the majority of this group? We must strive to make them self-

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Delivered before the Conference on Aging and Chronic Illness, sponsored by The Medical Society of Virginia and the Council on Health and Medical Care, Richmond, November 8, 1956.

sustaining, and indeed, often contributing not only to the support of themselves but to others. What are the issues as we now see them, the solution of which may serve to soften the blow, and to incorporate this group into our every day life as useful and active citizens?

We must remember that modern life in this country makes little or no provision for the oldster. Witness our housing developments where there often is no room for the grandmother or grandfather, or even the mother or father. In other countries, China, Scandinavia, Holland and England, an elderly person is venerated, and the younger generation listens to their counsel and seeks their advice. A few communities are experimenting with home-like facilities for the aged, where surrounded with friends and provided with active interest, they live a comfortable existence. I heard just the other day that suicide rates have been cut to practically zero in several such establishments which provide recreation, occupational therapy and companionship, whereas the rates had been very high before such units were in use.

Nutrition. One of our sad commentaries on our American way of life is that many older people are overweight, and it is well known that frustrations and worries lead to overeating. Statistically, it is quite evident that obesity leads to more increasing morbidity and decreases longevity. Control of weight alone is one of the methods of slowing down the incidence of hypertension, coronary disease, diabetes, and vascular disease in general. Also, with the concentrated interest in the effect of lipids on the progression of arterial changes, some progress may be made in diminishing the deterioration of various organs affected. There is hope that our vessels, if the practical results of such research pans out, may resemble those of the Bantus in Africa and others, who, eating a low fat diet, are said to have soft, pliable arteries.

Exercise. There is good evidence that increased blood cholesterol which may be one of the factors in accelerating arterial disease, can be kept down by an appropriate amount of sensible and moderate exercise. A balance between work and play should be obvious to all. Too much rest can have its manifest disadvantages.

Retirement. Unfortunately, through custom and various pressures, the age of retirement has been considered to be somewhere around 65. Factors which have brought about this conception are the adoption of this arbitrary ceiling on the basis of past predictions in regard to mental and physical capabilities at this age, a feeling that from 65 years of age on, both of these factors must worsen. In the light of our present knowledge, this is certainly not so, and indeed, many, many individuals can maintain their full mental and adequate physical capacity far beyond this point. Industry, unions, and the public must be made aware that the skills and wisdom of such a group must be utilized. There should be physiological, rather than chronological retirement. By this I mean that those who can contribute should in some way allowed to be continued on, if even on a consultative basis. Youth must be served, but not to the neglect of the elderly. Preparation for retirement should be an important part of every one's life, with the development of hobbies and new skills being of paramount importance.

Health maintenance. Health in all of its broadest aspects is so important to those in this phase of life. Moderation in every aspect of living is to be sought, and the primary prevention of disease states or, at least, their slowing down should be our goal. To achieve this, periodic health examinations are advocated. Just when these should be started and how often they should be done is a matter of debate, but at least, every man over fifty should have a health examination or a periodic check-up once a year. Such an examination should use all of the modern methods of detection of early symptoms and signs of disease. Most important of the methods to be used may be that contributed by a good history. Next, a thorough physical examination and the necessary laboratory tests and screening procedures. In taking the history, it is well to stress environment, fatigue, and various strains which may adversely affect the aging process. To be considered also are disease states experienced in earlier life which may contribute to disabilities of the later years.

Rehabilitation. Such a talk as this would be an empty one indeed if it did not mention rehabilitation. In areas where an enlightened medical profession exists, much has been accomplished to put the seemingly severely handicapped oldster back to a point where he can at least care for himself and often be an economical asset rather than a liability.

Mental. Too much stress cannot be laid on the importance of proper psychological and emotional adjustment of this group. As mentioned before, the let-down of retirement in those unprepared may lead to sudden and rapid physical deterioration, plus depression. Death or suicide, loneliness and inactivity may exact their toll, if this group is not sympa-

thetically handled. Proper disposition too must be made of our mildly senile oldsters, with the utilization of suitable nursing homes and other facilities, not mental institutions, for these persons.

Income. Wherever these individuals are capable, they should have equal job opportunities. In a recent group surveyed, only one out of twenty-five wanted to quit work. Various sources of income must be utilized to care for those who cannot support themselves. Adequate pension plans, O.A.S.I., social security, extension of health insurance, all must play a part.

The community must take its full responsibility to provide the many services, counseling, welfare, home care, home nursing, and of greatest importance, coordination and cooperation to provide the needed services. Above all, first must be an awareness that the problem exists and that it presents many features that need a solution. Churches, clubs and fraternal organizations may be quite helpful in the planning and implementation in this area.

The medical profession must apply all of its resources, which should include preventive medicine, medical care, rehabilitation, and the social aspects involved. All of us must work together to plan and do something about it. Research should be stimulated in all of the various manifold aspects of aging. By the cooperative thinking and efforts of all represented here today, we should make Virginia a shining example of what can be accomplished. Let us call upon our citizens and our State government to help us do something about it.

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Resembling Scarlet Fever

An apparently new disease with symptoms resembling those of scarlet fever, but without its seriousness, is reported by a Pennsylvania pediatrician. Thirty cases were seen at the State Hospital for Crippled Children, Elizabethtown, Pa., from November 4, 1955, to April 4, 1956, Dr. Mary D. Ames, Harrisburg, Pa., said in the American Medical Association's (February) Journal of Diseases of Children.

The scarlet fever-like symptoms were fever, sore throat, and a generalized, bright red rash. However, no streptococci, the causative agent of scarlet fever, were isolated from the throats of the patients and there was no scaling of the skin as in scarlet fever.

Dr. Ames pointed out that it is very important to distinguish between this new disease and scarlet fever because of the hardships that would follow wrong diagnosis. A diagnosis of scarlet fever means that the patient must be quarantined for at least seven days. In Pennsylvania, other persons residing on the premises cannot handle or sell food, milk, candy, beverages, or tobacco. The child loses time at school and the adults may be cut off from necessary income.

The rash in the new disease was present over the entire body, neck, and extremities, but was particularly marked on the groins and the back of the trunk. In scarlet fever the rash begins on the neck and later appears on the trunk and groins. The rash was also different from the characteristic rashes of red measles, German measles, infectious mononucleosis, and other known feverish eruptions.

Twenty-three children who were patients in the hospital, two doctors, two nurses, and a doctor's wife and two children were ill. The children were not remarkably ill and continued to be alert and active, but the adults were incapacitated for 24 to 48 hours with marked discomfort and weakness.

The method of spread and the incubation period were hard to determine. After the first two cases, the children were not isolated and the cases were rather spotty in the wards. Three times as many females as males had it.

The onset was abrupt with fever, sore throat, and general discomfort, followed in 12 to 48 hours by the appearance of the rash. Nausea and vomiting occurred in 17 patients, abdominal pain in 20, and signs of an upper respiratory infection in four. The average length of illness was three days. There were no complications. The course of the illness was not influenced by medication.

Rehabilitation Problems of the Aging and Chronically Ill

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IN 1941 the National Council on Rehabilitation adopted a definition of rehabilitation which has become practically standard in its acceptance—namely, that "rehabilitation is a process which restores the disabled person to the fullest state of usefulness of which he is capable, physically, emotionally, socially, vocationally and economically." While this appears to be more a statement of goals than a definition it does emphasize the breadth of our concept of the rehabilitation process itself and also the scope of problems that must receive our attention in developing programs of rehabilitation.

In the latter part of the same decade, a former Virginian, Colonel John Smith, who for many years was the Director of the Institute for the Crippled and Disabled in New York, and who is regarded by many as the "father" of our modern concept of total rehabilitation, defined rehabilitation as "a composite science," combining the following factors: "medicine in all of its specialties, including physical medicine and its corollaries, physical and occupational therapy; psychiatry; mental hygiene; clinical psychology and prosthetics. The new science also includes family case work, psychiatric and medical social work, recreation and social group work. On the educational and vocational levels it takes in vocational and academic guidance and training, job training in industry, sheltered workshop employment, and job placement."

From the above we can see that rehabilitation encompasses the broad span of human problems and that, in its most effective state, it enlists the participation of a wide range of professional skills and community services.

The chronic patient and the aged person both present a complex set of problems. Disability, especially after work age is attained, produces disastrous results both for the individual and for society. For the individual it may mean the loss of a job, loss of social competence and social acceptance, loss of opportunity, or even the loss of personal dignity, self respect, and integrity. For society it means not only the loss of individual productivity but assumption by someone of the care of a dependent person.

In their book entitled "New Hope for the Handicapped," Dr. Howard Rusk and Eugene Taylor state that by 1980, if present trends continue, each employed person in the United States will be supporting one aged or chronically disabled person in dependency. If this prediction is even remotely realistic, then we are considering here a problem of vital significance to all citizens.

As applied to the disabled segment of our adult population, the rehabilitation problems of the chronically ill and aging may be grouped into three major areas:

(1) Problem of employment. I mention this one first since in its solution there lies a partial solution to the remaining two. The proportion of men 65 years and over in the labor force has been declining steadily since 1900, now being less than 40%. This is an alarming reduction from the 68% employed in 1890. With an increase in life expectancy, a longer period of retirement can be expected.

Government estimates of what it costs an elderly couple to maintain a "modest but adequate" level of living now is put at $2,500 annually. Yet less than forty per cent of such families now have a cash income of $1,500 or over per year.

Despite the exemplary work records of handicapped and older workers, as compared to younger able-bodied workers, in productivity, turnover, and absenteeism, it still remains a major problem to find employment after the 50-year mark is reached or for the chronically disabled at any age. It seems wholly unrealistic that we should still cling to the traditional, ancient economic policy of retirement at age 65 when the life span and productive capacity of the worker have been so greatly extended. It is equally indefensible that many, if not all, of the familiar roadblocks to employment of the disabled should still be with us in the face of modern ex-

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perience in industrial medicine, safety programs, and the proven reliability of such workers.

(2) Our second major problem area is the maintenance of physical fitness and health. Stated another way, it is the problem of securing the benefits of modern rehabilitative medicine for the reduction or removal of disability. If we could but put them to use, we now have the "know how" to rehabilitate a very sizeable percentage of our aged and chronically disabled to the point that they are again capable of satisfactory employment. "From bed to job" is no longer an empty slogan, when modern medical skills and facilities and the other supportive services required are employed in a functioning team effort. An even larger per cent of such persons would respond to treatment having no higher goal than the restoration of self care and physical independence.

The chronically disabled may need corrective surgery, medication to control disability, or a continuous program of health supervision. In addition he may need to be retrained to walk and travel, to care for his daily needs, to use normal methods of transportation, to use ordinary toilet facilities, to apply and remove his own prosthetic devices, and to communicate either orally or in writing. These are such simple things that they are often overlooked; but the personal, vocational and social success of the handicapped person is dependent on them.

When we consider that today no more than one out of ten, who is in need of and could profit by such efforts for restoration of physical competency, can be helped, we can realize how great is the gap between resources available and the job to be done.

(3) The third major problem is in the area of social adjustment. In an address some years ago, Dr. Guy Fisher, former president of the State medical society, remarked that "in every community, there are disabled and aged persons relegated to the back rooms of their homes for whom even normal social life and family participation is denied." We live in a society that respects only the productive. The ending of ability to do gainful work is for most, a tragedy; it symbolizes the end of independence and purpose in life. To the extent that we can, through rehabilitative measures, restore the ability to live purposefully and constructively, do we create the likelihood of happy social adjustment.

Success achieved in the rehabilitation of the disabled under the State-Federal program of vocational rehabilitation attests to the practicality of rehabilitation. Persons with substantial job handicaps because of physical or mental impairment and who have a reasonable chance of becoming employable, are being served in steadily increasing numbers in these state administered programs.

Of the 2,252 persons rehabilitated in Virginia in 1955-56 fiscal year through this program, 24% were over 45 years of age. 14% were over 55 years of age. The average cost of rehabilitation per case was $480. The average earnings after rehabilitation were at the annual rate of $1,750. Only 19% of those rehabilitated were living on their own income or earnings at the time rehabilitation was undertaken. Diseases were specified as the cause of disability of 57%. Twenty-nine per cent were disabled from accidents and 14% were born with their handicaps. These figures are secured by projecting national experience to the state group.

These experiences indicate that if resources were available—facilities, specialized personnel, and funds—we could reclaim to usefulness and productivity a truly sizeable number of the aging and the chronically ill through appropriate rehabilitation measures.

Either advanced age or chronic disability present obstacles to the achievement of personal competence and security that are quite formidable. In combination, the handicap is compounded. The absence of opportunity for rehabilitation is for many a crowning blow.

A few years ago Lord Beveridge of England advanced the revolutionary idea that "want" is a needless scandal, that a community could eliminate want if it chose to do so. While we are not proponents of any scheme for "cradle to the grave" security, we must view such programs as categorical public assistance to the disabled and disabled benefits payments under our national Social Security system as a recognition of society's responsibility for those who are unable to engage in any substantial gainful activity. As we advance (or retreat, depending on your viewpoint) toward greater security for all citizens against the problems of old age and chronic illness, we must not accept any form of disability payments as a substitute for rehabilitation. Income maintenance through individual industry and effort is the traditional American way to personal security.

The challenge to action is very appropriately summarized in the closing paragraph of the Report of the Task Force on the Handicapped, of which Dr. Theodore Klump, President of Winthrop Stearns, Inc., was chairman. We quote, "We have arrived, then, at a place in which the opportunity for vast

expansion of our capabilities in dealing with the problems of disability calls for a declaration of our intentions, some decisions and action. This progress (that we have made) is not in itself an answer—not when we remember that the scope of the present work is still so limited that we are not even beginning to keep abreast of the workload among the newly disabled—that we are, in fact, accumulating more backlog. Yet we should recognize that we are now in a position where we may, with confidence, undertake a major program for transforming large numbers of disabled Americans, now non-productive and often publicly supported, into active, working, productive, tax-paying citizens. The technical skills, the program know-how and the impetus of an expanding field are there, if we elect to use them."

Writing in the Journal of Rehabilitation, Miss Belle Greve, Director of Health and Welfare services for the City of Cleveland, stated: "Rehabilitation, to be successful, must have three dynamic parts: First, the individual himself and his own desire to overcome, to develop, to participate; second, the ready availability of all the special services which have been found necessary—either singly or as a team—for rehabilitation; third, that attitude of the general public which sees the individual before the disability—sees his capacities as clearly as his limitations—and is willing to offer employment as well as normal community social life."

We are embarked on a great national effort to extend and improve rehabilitation programs and services so that we can exploit to the fullest "the rehabilitation way" in solving the problem of disability. This expansion manifests itself nationally in the enactment in 1954 of new, broader rehabilitation legislation, and a stronger base of support to states and communities in their efforts to rehabilitate greater numbers of the disabled. Locally it has meant a new awakening to the problem of disability among us, and of the community responsibility for finding an answer to this problem.

While we may rightfully expect leadership from our State and Federal agencies in stimulating interest in the whole rehabilitation problem, it is in the attitude of our physicians, hospitals, employers, community agencies, and interested citizens that the real answer lies.

To create the means whereby disabled persons who desire to work may be given the opportunity, and whereby those capable only of self care and physical independence may have opportunity for such achievement—these are our mutual goals.

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700 East Jefferson Street
Charlottesville, Virginia

Doctor Works Sixty Hours a Week

"For every eight hours the typical American works, the typical physician devotes twelve hours to the practice of medicine." So reports *Medical Economics* in an article appearing in its February issue. The magazine bases its reports on its 8th Quadrennial Survey of the doctor's economic status.

"Whether the doctor practices alone, in partnership, or in a group, his working hours are about the same," *Medical Economics* finds. "Nor do they vary much by income, region, or years in practice.

"But working hours do vary according to field of practice, size of community, and number of patients seen daily." "For example, the typical G.P. puts in about an hour more a day than the typical specialist."

Dermatologists generally work the shortest medical week: some forty-two hours—the magazine reports. Neurosurgeons, on the other hand, generally put in the longest week: sixty-six hours.

Typical general surgeons, internists, pediatricians, and general practitioners, according to *Medical Economics,* work sixty hours a week.

Are Salmonella Infections in Western Virginia On An Increase?

K. F. MENK, M.D.
FRANCES SWECKER, MT. (ASCP)
Staunton, Virginia

IN THE PAST twelve months, 1956, there has been a marked increase in the number of Salmonella infections detected by the Laboratory of Kings' Daughters' Hospital, Staunton, Virginia. This report is made to draw attention to their increasing occurence and to new factors now operating that may be responsible for their apparent rising incidence. A review of the annual reports of the State of Virginia show that in 1953 there were fifty-four cases of typhoid fever in Virginia and in Augusta County three cases of Salmonella infection and no cases of typhoid fever. In 1954 there were seventy cases of typhoid fever in Virginia and in Augusta County there was one case of Salmonellosis and no cases of typhoid fever.

In the past twelve months in Kings' Daughters' Hospital laboratory, located in Augusta County, there have been identified bacteriologically three cases of Salmonella typhosa and four cases of Salmonella schottmuelleri and one case of Salmonella enteritidis infection. These represent more cases than have ever been found before by the laboratory. The accompanying chart shows the date, age, sex, source of culture and sensitivity of the organism.

Of interest is the fact that two of these cases occurred in people after their return from an overseas journey. The case of typhoid fever occurred in a man after a South American trip. The case of Salmonella enteritidis associated with Shigella flexneri occurred in a lady after a trip to the Near East. These two cases point up the necessity of increased care on the part of our traveling Americans to prevent enteric infections.

A possible explanation for the increased number of enteric infection was a reduction in the amount of water available for springs and wells, but information obtained shows no marked decrease in surface water for the area.

Date	Age	Sex	Source of Culture	Micro-Organism
Dec., 1955	2	M	Stool	S. schottmuelleri*
Apr., 1956	63	M	Blood	S. typhosa*
June, 1956	51	F	Stool	S. schottmuelleri
June, 1956	51	M	Stool	S. schottmuelleri
Aug., 1956	56	F	Blood	S. typhosa*
Sept., 1956	45	M	Blood	S. schottmuelleri*
Oct., 1956	9	F	Stool	S. typhosa*
Oct., 1956	46	F	Stool	S. enteritidis*

*Sensitive to chloramphenicol and nitrofurantoin.

Early in the year one of our technicians was able to attend the excellent course on Enteric Infections sponsored by the State Health Department in Richmond. Her increased interest and ability in finding this type of disease must be considered in discussing the increased incidence.

Because of the unnecessary illness on the part of eight people in our locality, it is suggested that people traveling to foreign lands take increased precautions, and that our water supplies be more adequately checked than they have in the past.

King's Daughters' Hospital
Staunton, Virginia.

Clinicopathological Conferences

Of The Medical College of Virginia Hospital

Prepared and Edited by

GORDON HENNIGAR, M.D.
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Case #195 (A-8426)

A FIFTY-SEVEN YEAR OLD white male executive was admitted to M. C. V. Hospital at 8:00 A.M. on February 20th. He and his wife had left their Pennsylvania home the previous day on a trip to Florida. The patient drove all day and complained of being tired and dizzy when they stopped for the night at a motel near Richmond. During the early part of the night the patient seemed uncomfortable with a great deal of moaning and groaning and during this period he had three black stools. At about 3:30 A.M. he vomited approximately one cup of bright red blood, appeared disoriented, and fell to the floor in a semi-stuporous state. A short time later he was seen by a physician and immediately sent to the hospital.

The patient's wife related that approximately ten years earlier the patient had been found to have "stomach ulcers" by x-ray. He had never been a hearty eater and in previous years had been a rather heavy drinker. In the past six months he had been under a doctor's care because of shortness of breath, a chronic non-productive cough, and mild ankle edema. He had not had any specific G-I symptoms recently. The wife frequently noted blood on the patient's pillow in the morning. In addition he was subject to frequent headaches and nocturia of indefinite degree and duration. He was a heavy smoker.

The patient's mother had died with tuberculosis. One brother had died with a heart attack six months earlier. The father and five siblings were living and well. The family history was otherwise negative.

Physical Examination: Temperature 99.8. Pulse 116. Respirations 24. Blood pressure 140/80. The patient appeared well developed and well nourished, but was disoriented and combative. The sclerae were icteric and there were numerous spider angiomata on the upper thorax. Pupils were dilated, but reacted to light. The fundi were normal. The mouth and throat could not be adequately examined, and there was blood in both nares. The neck veins were full. The chest was symmetrical with normal pectoral hair. The lungs were clear and the heart was not remarkable. The abdomen was moderately obese and the liver was palpable with the left lobe "much larger than the right". The spleen was not felt and ascites was not demonstrated. Rectal examination was not done. The buttocks were covered with tarry black feces. The reflexes were intact as well as could be determined in a constantly moving patient.

Laboratory Data: Hemoglobin 10.4 grams, WBC 10,800, polys. 93, lymphs. 7. The urine was acid with a specific gravity of 1.020 and was negative for albumin, sugar and acetone with a few WBC/hpf. BUN 38 mgm.%. Prothrombin time 27 seconds, control 13 seconds, concentration 18%. Serum bilirubin 1.4 mgm.% direct, 3.4 mgm.% total. Serum protein 6.0 grams %, albumin 1.9 grams % and globulin 4.1 grams %. Serology negative.

At 4:00 P. M. on the day of admission, after 1,000 ccs. of whole blood, the hemoglobin was 11.3 grams %, hematocrit 32%, RBC 3, 160,000, MCV 100, MCH 35, MCHC 35. Cephalin flocculation 4+. BSP 35%. Blood sugar and electrolytes essentially normal. The following day the blood indices were MCV 89, MCH 31, MCHC 36.

Therapy initially consisted of multiple transfusions, intravenous fluids, intravenous Vitamin K_1, intramuscular paraldehyde for sedation, streptomycin, and penicillin. The patient became more stuporous and developed respiratory difficulty. A tracheotomy was done to maintain an airway and Cedilanid was administered. The following day chest x-ray revealed massive atelectasis of the left lung and bronchoscopy was carried out. A small amount of pus was found in the left main bronchus, but the obstruction was thought due to swollen edematous bronchi. Intravenous Achromycin was be-

gun. The urine output was satisfactory, and the prothrombin concentration had risen to 33%.

By February 24th the patient had improved considerably. He was conscious and fairly alert and recognized members of his family. However, on February 27th he began to bleed again with vomiting of blood and passing grossly bloody stools. He again lapsed into coma and went steadily downhill and expired on February 28th. On the day of his death his hemoglobin had dropped to 7.8 grams and his prothrombin concentration was 10%. A repeat x-ray on February 27th showed elevation of the left diaphragm and probable lower lobe atelectasis.

CLINICAL DISCUSSION

Dr. John Edgar Stevens*: A fifty-seven year old white male executive, en route to Florida, was admitted to this hospital in the early morning of February 20, having vomited one cup of bright red blood and having had three black tarry stools during the 8 to 10 hours prior to admission.

It is significant that he was well enough to drive approximately 300 miles the day before, so his complaint of fatigue and dizziness after such a trip would not have been unusual except for the events that followed. There was moaning, groaning, and discomfort in the early evening, and it was then the tarry stools were passed. The abdominal pain and cramps that may accompany active gastrointestinal bleeding are well known. The disorientation and semi-stuporous state that followed within a few hours, along with hematemesis is *not* typical of hemorrhage alone. It suggests an impairment of the central nervous system, and the probable relation between the two can become involved.

Before going further into the protocol, one is reminded of several articles in recent years that showed a crucial link between cortical lesions or stimuli and the stress they exerted on the upper gastrointestinal tract producing ulcerative lesions. In some cases reported by Dr. Loyal Davis at Northwestern University, there was abrupt hematemesis in a patient too ill to complain, followed by gastrointestinal bleeding and death. While his cases were postoperative neurosurgical patients, other authors showed that various brain tumors and neurologic disorders could react in the same manner, presumably by stimuli mediated through the hypothalamus and vagal nuclei.

If we approach our particular problem here from this angle, we would have to assume that a central nervous system disease or tumor accounted for the unusual behavior and the stress of a long trip suddenly brought forth this episode of severe gastrointestinal hemorrhage.

This premise becomes more suggestive of a possible CNS lesion when we learn that he was subject to frequent headaches and that blood had been noted on his pillow some mornings by his wife. One wonders if he had convulsive seizures with tongue biting because of a brain tumor that had until now gone undiscovered. Despite its possibilities, I am discounting this approach. The reasons are: his ocular fundi were normal; the pupils, while dilated bilaterally, reacted to light; and reflexes were intact as well as could be determined "in a constantly moving patient".

Two features of his past gastrointestinal history are significant. One, he had had x-ray evidence of peptic ulcer ten years previously, and two, he had been a heavy user of alcohol in past years and never was a hearty eater. However, he had not complained of any gastrointestinal symptoms recently.

Portal cirrhosis in this patient was suggested by the poor dietary and alcohol history and apparently substantiated by the physical examination and the laboratory studies. Spider angiomata which were present on his thorax *are not* seen, as far as *I* know, in any disease except cirrhosis. Jaundice, which was evident in his sclerae, is a poor prognostic sign of cirrhosis even without ascites.

The laboratory data lists the prothrombin concentration as 18%, a level that denotes profound hepatocellular damage, and would be in a range where hemorrhagic tendencies should be expected. Thus, the blood on the pillow may have come from nasal or mouth bleeding while at rest. The serum bilirubin showed a total of 3.4 mgm.% and the variance in the direct and indirect fractions are probably of little significance in this instance. The serum proteins, while a good total of 6.0 grams per cent, showed a complete reversal of the albumin and globulin ratio. Such a reversal with hyperglobulinemia of 4.1 grams per cent is seen in cirrhosis, and also most chronic infectious diseases and collagen diseases. The four plus cephalin flocculation test fits with the increased serum globulin as further evidence of active hepatocellular damage, as does the 35% retention of bromsulphaphthalein dye in the blood.

With these findings, one would have to accept a diagnosis of portal cirrhosis of the liver, and use this as a basis to explain other findings.

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The insidious onset of cirrhosis being below clinical recognition for years is well known. It is unusual for a patient to have had this disease so long that spider angiomata and jaundice develop without having more subjective gastrointestinal complaints, or cerebral disturbances such as restlessness, confusion, etc.

Often, as in this patient, a sudden massive gastrointestinal hemorrhage brings a disease that has been relatively asymptomatic to attention, but unfortunately, a train of events has begun that too often ends fatally. One-third of cirrhotics have upper gastrointestinal bleeding as a fatal complication, while the other two-thirds die of progressive disease of the liver.

While peptic ulcer has been an associated disease in cirrhosis and could account for this bleeding, especially since he had proof of such ulcers ten years before, esophageal varices are statistically more common as a cause for hematemesis in cirrhosis. Dr. Higgins, on our staff, in 1947 reported 115 patients with varices, of whom 50% died from hemorrhage.

Portal hypertension produces collateral circulation at the cardiac end of the stomach where a plexus of veins serves as an anastomosis between the portal and superior caval venous systems. The veins of the lower esophagus enter into the azygos vein and so into the superior vena cava. Evidence that this was occurring is given by the note that the neck veins were distended. This suggests that a right-sided heart failure was occurring, for we are told "the lungs were clear and the heart not remarkable". Under greatly increased pressure these dilated esophageal veins had a rupture and most probably were the source of the bleeding, rather than a peptic ulcer.

The size of the liver is a variable thing in cirrhosis. We are taught that the size of the organ decreases because of the fibrosis which is one of the distinguishing pathologic features of the disease. However, clinically, there is nothing characteristic about the size. It varies widely from 800 or 900 grams to as much as 3 to 4,000 grams. Fat deposits in the organ account chiefly for the difference in size. Snell and others have noted that a normal sized liver may be noted throughout an entire period of observation, while Patex, McNee, Rolleston, and others describe livers in cirrhosis "more often enlarged than diminished in size."

Here there is a palpable liver with a "left lobe much larger than the right".

A malignant tumor of the liver should always be considered when hepatomegaly is found, and especially when one lobe is found larger than the other. Most often the right lobe is enlarged in primary carcinoma, although when there is more than one site the surface is irregular and hard.

While primary malignancy of the liver is not common, metastatic malignancies are prone to occur in this organ. On the other hand, metastatic lesions are of a longer course and pain, fever, and ascites are common. Cirrhosis is *not* common as an associated disease in metastatic malignancy, whereas it occurs in 2/3 of those proven to have a *primary* malignancy of this organ. Stated another way, approximately 5% of all cases of cirrhosis will have a primary carcinoma associated.

There are two main types:

1. *Hepatomas:* from the polygonal cells. These invade blood vessels and spread throughout the organ or outside to regional lymph nodes and lungs.
2. *Cholangiomas:* arise from the epithelium of small bile ducts.

Malignancy of the liver should be suspected when there is weight loss, pain, and weakness. Otherwise, the symptoms are those of cirrhosis with which it may be associated.

Our patient, as far as we know, had no previous weight loss, fever, pain, or excessive weakness. So, we have only the hepatomegaly and the enlarged left lobe of his liver to make us think of the possibility of malignancy.

Other causes for liver enlargement are benign tumors which are rare, but these too are associated with previous inflammatory diseases such as cirrhosis. One that particularly affects the left lobe is a hemangioma. Parasitic cysts such as the echinococcal cyst are chiefly in the *right* lobe of the liver and rarely present much evidence of liver impairment. Simple non-parasitic cysts have much the same clinical characteristics.

The behavior of this patient was alarming to those in attendance. He changed from disorientation to semi-stupor to a constant movement so that reflexes and other examinations were difficult to obtain. Then, on the second day, he was again stuporous and so dyspneic that a tracheotomy was done.

Hepatic coma is one of the serious complications of acute or chronic liver disease and carries an extremely high mortality. It can occur at any time in the course of the disease, but especially shows

up during times where there is further deterioration of liver disease, as excessive blood loss from the gastrointestinal tract, severe infection, or acute alcoholic bouts.

Impending hematic coma may be suspected when mental changes show confusion, disorientation or semi-stupor. Or, a characteristic tremor called "flapping" with coarse, irregular, flexion-extension movements of the metacarpophalangeal joints and wrists, and even the elbows and shoulders is seen. Could this be the cause for his behavior and constant movement after admission? I believe so, because the physical findings, the massive hemorrhage, and the mental changes certainly lead one to this conclusion.

An abnormally elevated level of ammonia in the blood is believed by some to be the basis for such findings of hepatic coma. Others feel that altered amino acid metabolism of the liver or the presence of detrimental amines interfere with cerebral metabolism.

Ingestion of urea, ammonium salts, or nitrogenous materials can produce elevations of ammonia in the blood. Shock, exertion, and also blood in the gastrointestinal tract likewise may give the same finding. Blood transfusions which the patient was given also have been indicted.

We are told that on admission, the lungs were clear and the heart not remarkable. Either this is a mistake because of the difficulty in examining the patient, or we have to assume that something acute happened in the 24 hours after his arrival at the hospital. The first chest x-ray, taken on February 21, shows a tracheotomy tube in place and what we have to assume as *fluids* in the left chest. We are told, however, it was a "massive atelectasis". This is a portable film, no doubt, taken while the patient was lying flat. The tracheotomy was done to maintain an open airway because of respiratory difficulties. Had he in vomiting aspirated gastric contents or blood into his bronchi? Had he in vomiting caused an esophageal rupture? The Mallory-Weiss syndrome of esophageal rupture is severe chest pain following retching and vomiting, followed by clinical signs of leakage into the mediastinum or chest. Our patient had evidence of melena before he vomited blood which may be a point against a small rupture of the esophagus. However, if his chest *was* clear on admission, which I doubt, we have to assume that this picture occurred after that time. I do not feel this is atelectasis. Supported with radiologic opinions from Drs. Goodman, Hershley, and Barr, I have to call this a pleural effusion of some type. Had an esophagoscopy or passage of a tube for balloon tamponage to stop bleeding from esophageal varices been attempted? Rupture of the esophagus occurs in rare incidences after this procedure.

We are told the day after admission he had a bronchoscopy for "massive atelectasis of the left lung". Apparently they disagree that this film represents fluid. Only a small amount of pus was found in the left main bronchus and obstruction was thought to be due to swollen edematous bronchi. We are not told whether a thoracentesis was done.

To return to his history, he had shown a nonproductive cough, shortness of breath and ankle edema for six months. His mother dying of tuberculosis and the fact that he was a heavy smoker are points to help or worry us. I favor the latter.

Hydrothorax and edema are features of cirrhosis, a disease we have to accept he has. The lowering of the serum albumin to 1.9 grams per cent is probably a contributing cause for the appearance of edema fluid in the ankles and left chest. A left hydrothorax developing over the previous six months could certainly give the cough and dyspnea.

However, the next film, taken on February 27, the day before death, shows more clearly what is being called atelectasis in the left lower lobe. However, there is contention that some fluid remains on this side. On studying the chest film, it should be noted that what appears to be the trachea is pushed to the right. What appears to be an elevated left leaf of the diaphragm may not be that at all. The area that is being called atelectasis may be an infrapulmonary effusion in what I assume is an upright film. You will note an air bubble about four inches below the dome of this fluid, diaphragm, or mass. If this is air in the stomach, rather than colon, then I suspect the left leaf of the diaphragm is not greatly elevated. Instead, it is a mass or fluid between the diaphragm and lung base, and would account for some shift in mediastinal structures to the right. Atelectasis, on the other hand, should cause a shift to the left.

Bronchial obstruction may occur in tuberculosis, but usually calcified glands or other evidence of the disease is seen. There is no x-ray evidence of it here.

Pulmonary neoplams should always be excluded with such a history. Bronchiogenic carcinoma occurs most often in males after the age of 40. Most arise in the main bronchus and first give obstructive

emphysema and dyspnea and then more complete obstruction with atelectasis. Epidermoid carcinoma is more frequent than adenocarcinoma in the male. Epidermoid carcinoma has slow growth and metastases occur later. In a survey of 3000 cases, Ochsner found 72% metastasized to regional lymph nodes, 33% to the liver and 16.5% to the brain.

A single bronchoscopic examination often fails to find tumor cells, so finding only pus and swollen, edematous bronchi is not conclusive that a tumor did not exist and spread by lymphatics and blood channels to involve the liver and brain.

On February 27 he again began to vomit blood and pass grossly bloody stools. He again lapsed into coma, and died the following day.

Trying to fit all of this together into the diagnosis of cirrhosis with death directly attributable to its complications is my goal.

Therefore, I would like to suggest that this man for six months had been seeing his physician in Pennsylvania because of his cough and dyspnea. He may have had recurrent attacks of chronic bronchitis or bronchiectasis. With his underlying liver disease and hypoalbuminemia, hydrothorax was developing and his symptoms increased. The harried physician by this time advised a trip to Florida hoping that the warm climate might have its beneficial effect!

By the time he reached Richmond after a long day's drive, he was tired. He probably had a drink or several before eating his evening meal. Ordinarily he did not eat heavily. He may *have* that night, or he may have had gastrointestinal bleeding even before. At any rate, he slept fitfully with moaning, groaning and passage of black stools. Then came the bloody vomitus, the lapse into semi-stupor and the admission here in a disoriented, combative state.

However enticing the possibilities of malignancy are in this case, I am not of the opinion that malignancy plays a part. In an effort to keep the diagnoses simple I feel they are:

Dr. John Edgar Stevens' Diagnosis

Portal cirrhosis, severe

Hepatic failure with coma, secondary to portal cirrhosis

Gastrointestinal hemorrhage due to rupture of esophageal varices or peptic ulcer (least probable)

Infrapulmonary effusion due to hypoalbuminemia or rupture of the esophagus

Pathological Diagnosis

Laennec's nutritional cirrhosis (atrophic stage)

Chronic interstitial pancreatitis

Recurrent rupture of esophageal varices resulting in gastrointestinal bleeding

Spinder nevi

Reflux of esophageal bleeding into tracheobronchial tree and aspiration pneumonia

Ascites (3300 cc.) and left hydrothorax (2100 cc.)

Atelectasis of left lower lobe of lung

DISCUSSION OF PATHOLOGIC FINDINGS

Dr. S. H. Choy*: At autopsy there was ascites of 3300 cc. and hydrothorax of 2100 cc. of the left side. The stomach contained approximately 800 cc. of blood. The source of this bleeding was found in the lower third of the esophagus where there were numerous varices, many of which had ruptured. Microscopically, some of the varices were thrombosed and a few others showed necrosis of the overlying mucosa (Fig. 1). The liver was small, yellow, of normal contour and weighed 1500 grams. It cut with markedly increased resistance. The normal architecture of the liver was completely replaced and reconstituted by fairly uniform pseudolobules or nodules, 2-5 mm. in diameter, which were separated from one another by dense infiltrating, finger-like strands of fibrous septa. Many of these nodules showed yellowish, necrotic centers and a few showed bile stasis (Fig. 2). Microscopically, the nodules consisted of hyperplastic liver cells which were arranged in an irregular fashion with no central veins detectable and sinusoids often widely dilated (Fig. 3). Some liver cells contained two or more prominent nuclei. These regenerating nodules were characterized by their tendency to grow at the periphery causing compression of the vascular fibrous septa. Regeneration of liver cells in the collapsed fibrous membranes was prominent.

The tributaries of hepatic vein are most susceptible to pressure by fibrous septa and this obstruction contributes to the elevated pressure in the portal system. Probably more important from the pathophysiological standpoint is anastomosis of blood vessels in the fibrous septa, as demonstrated by the reconstruction studies of cirrhotic livers. For example, communication between the hepatic arteries and the branches of the portal veins will result in portal hypertension. Similarly, anastomoses between the branches of portal vein and the tribu-

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Fig. 1—Section of the esophagus showing dilated venules with necrosis of overlying mucosa.



Fig. 2—Cross section of the liver showing diffuse uniform nodularity. Dark colored nodules indicate bile stasis.

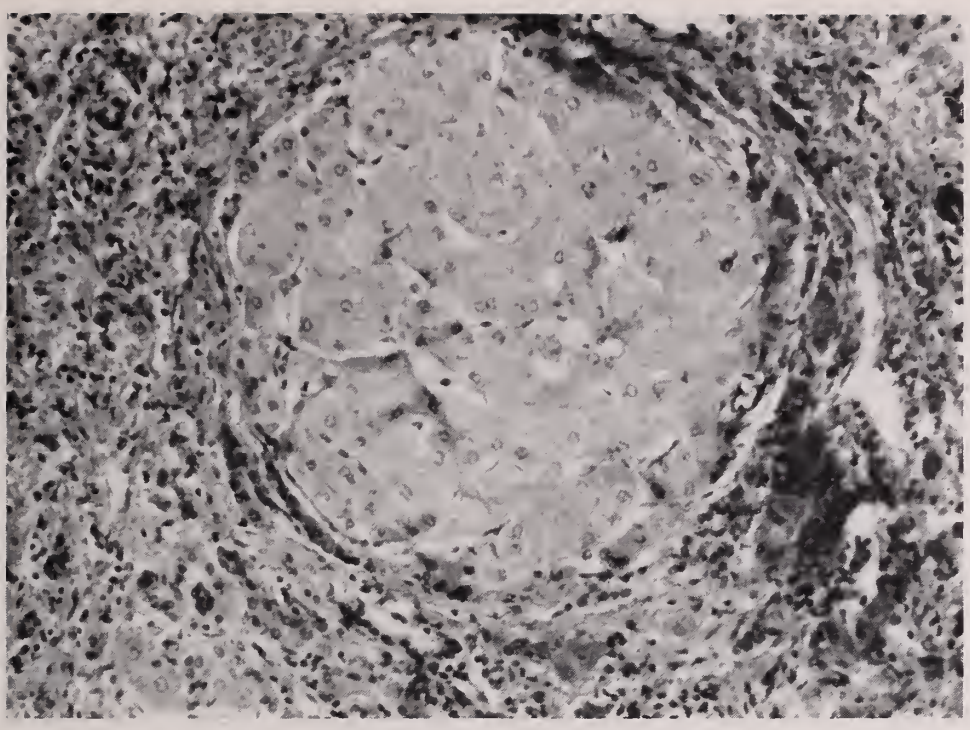


Fig. 3—Photomicrograph of a regenerating nodule of liver cells with compression of fibrous septum which includes blood vessels, proliferating bile ductules and lymphocytic infiltrate.

taries of hepatic vein will allow a shunt of blood by-passing the liver parenchyma. Thus the liver cells are placed in danger of hypoxia and this results in centrinodular hypoxic necrosis. These shunts thus maintain the cirrhotic process even when the initial injurious agent has been removed. The hypoxic necrosis when extensive will deprive the body of the hepatic function which is reflected in systemic manifestations of hepatic insufficiency. It should be noted that according to the recent analysis of the cirrhotic cases in our autopsy file the incidence of hepatocellular necrosis is far more frequent in patients who had episodes of gastrointestinal hemorrhage prior to death[2]. Hence, the jaundice which appears several days after a severe G-I hemorrhage is explained. That is, necrosis of liver cells with inability to excrete bile.

In the pyloric region of stomach there was found a small, chronic ulcer which showed no evidence of recent hemorrhage. The incidence of peptic ulceration in cirrhotics appears to be definitely higher than among the general population. Recently Swisher[1] reported 417 cases of liver cirrhosis in which 13.9 per cent showed evidence of peptic ulceration. Of those who had peptic ulcers in the duodenum or in the stomach, 20 per cent had esophageal varices in addition. Twenty-eight per cent of these patients were admitted because of hemorrhage from the ulcer. Diminished bile in the duodenum resulting in decreased alkalinity may play a role in the pathogenesis of such ulcers.

The spleen showed slight congestive splenomegaly and weighed 200 grams. The pancreas was markedly atrophic and showed areas of fibrosis and focal lymphocytic infiltration. The tracheobronchial tree contained a large amount of mucosanguinous material and there were areas of aspiration pneumonia in both lungs. The left lower lobe showed extensive atelectasis which was due to the pleural effusion. The brain showed no gross or microscopical findings of significance.

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Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

The public acceptance of Blue Cross-Blue Shield and health insurance during the last twenty years is one of the most interesting social and economic phenomena of our times. But despite the giant strides which have been taken in making the voluntary prepayment mechanism available to many elements of the nation's population, there are still areas in which much must be done in order to keep pace with the public need.

This page has previously discussed some of the things Blue Cross-Blue Shield is doing to meet this need; a discussion of the role commercial insurance companies are playing is now in order. Accordingly, arrangements have been made to publish here a recent release of the Health Insurance Institute.

The following report is being made by the Health Insurance Institute in behalf of the insurance companies writing health insurance. It points up the progress being made and gives optimistic hope that even greater accomplishment can be expected in the near future.

R.J.A.

EXPANDING HEALTH INSURANCE COVERAGE

A study of 129 group health insurance programs representing a cross-section of the types of coverage in force among many United States industries shows an increase of over 100% in the number of programs which help to provide protection against the cost of hospital and doctor bills after retirement in the last four years. The increase demonstrates the progress and continued efforts of the nation's insurance companies on a free and voluntary basis to develop for the American people the best possible health insurance coverage for the greatest number.

The comparison study of the sample number of health insurance plans revealed that as of December 1956, 62 of the 129 group plans, affecting 3.1 million workers, offered insurance protection at the retirement age. This figure represents an increase of 1.6 million persons over January 1953, when only 25 of 106 plans surveyed, affecting 1.5 million employees, offered similar coverage. Since the majority of the 62 plans also continue protection for dependents of retired employees, the number of people eligible for such health insurance coverage at present can be more than double the three million figure.

An upward trend in the types of medical care benefits for retired employees was further revealed in the survey of 129 group health insurance plans throughout the country. During the past four years, the number of plans in this sampling providing for in-hospital medical expenses has nearly tripled, while at least 16% of the plans now provide major medical expense coverage at retirement. In January 1953, no protection for retired employees was available against major medical expenses, a type of health insurance coverage which helps to defray the cost of serious, or catastrophic accident or illness. In addition, this broadened health insurance coverage includes the dependents of the retired worker.

Growth in the number of insurance company medical care programs which offer continued coverage for retired workers through individual insurance policies was also noted in the survey. Two plans in January 1953 provided coverage by a change from group to individual policies. In December 1956, 11 plans offered continued protection at retirement against medical costs by conversion to individual policies. Thus, there are now 73 of 129 plans (57%) which provide health insurance coverage for retired workers, as against 27 of the 106 plans (25%) which existed in January 1953.

The study of group health insurance plans in force through insurance companies among the cross-section of American business indicated that the types and amounts of medical care benefits provided to active employees have also broadened and increased during the last four years. Gains in types of health insurance include:

* The number of plans providing for in-hospital medical expenses (non-surgical) has almost doubled between January 1953 and December 1956.
* The number of plans providing for major medical expense coverage increased 6-fold during the four year period.
* These broader coverages have been made available to dependents as well as the active employees themselves.

Gains in the amounts of health insurance benefits include:

* Four years ago, 78% of the plans paid $10 or less for daily room and board and only 10% paid $14 or more or the full cost of semi-private accommodations. Today, only 29% pay $10 or less and 50% pay $14 or more per day or the full cost of semi-private rooms.
* In January 1953, 46% of the plans paid less than $200 for special services and only 22% paid over $400 or set no limits for such services. Currently, only 17% of the plans pay less than $200 and 41% pay over $400 or set no limit for special services.
* Earlier, 37% of the plans set limits of 31 days for benefit payments under basic hospital contracts, and only 15% provided for 120 days or more. By December 1956, only 12% of the plans were for 31 days' duration and 37% were for 120 days or more.
* As of January 1953, 21% of the plans paid a maximum of $200 or less for the cost of operations, and only 18% provided for a maximum of $300 or more. Today, only 4% are paying a maximum of $200 or less for surgery, and 49% pay $300 or more to cover the cost of operations.

The four-year comparison study of medical care benefits provided to active employees and employees at retirement through group insurance plans was conducted to measure the trend in the growth and expansion of voluntary health insurance through insurance company protection programs.

A Device for Testing Sputum

A device that makes testing sputum for tuberculosis germs in the hospital laboratory safer and easier has been developed by a Veterans Administration bacteriologist.

It is an agitator for sputum specimens, made from a new kind of paint shaker by Abraham L. Rosenzweig at McGuire VA Hospital in Richmond, Va.

VA has adopted the device as a standard item for its 173 hospitals.

Mr. Rosenzweig explained that in making the important sputum tests for TB, the viscous material must be homogenized before its parts are separated in a centrifuge.

To give it vigorous agitation, bacteriologists use a standard paint agitator, the kind used to mix paint at hardware stores.

Standard paint agitators vibrate so much that they must be specially anchored with a mounting. Even so, they cannot be secured easily under a safety hood in the laboratory to protect workers from the live germs under test.

Mr. Rosenzweig puzzled over the problem of finding a better sputum agitator, and one day in a hardware store he found just what he was looking for, a new kind of paint agitator with a main part that does not vibrate.

It is a black box that looks like an oversized automobile battery and has two heavy metal baskets on top in which paint cans are screwed for shaking.

McGuire Hospital ordered one of the new agitators and the hospital's metal worker fitted it with special tin trays and tin cans to hold the glass bottles in which sputum specimens are tested.

This modification made it possible to give efficient agitation to eight sputum specimens at one time without vibration, a process requiring only about 10 minutes.

The important advantage of the device that assured its adoption for VA hospitals, Mr. Rosenzweig said, is its safety. It goes a long way in reducing the potential danger from live TB germs released by vibration to float in the air of the laboratory.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

The Rains Descended and the Floods Came

The first indication that there might be floods in Southwest Virginia came during the night of January 28-29, 1957, when continuing rains swelled rivers toward their banks. Around 8 A.M. on the 29th, the waters began to pour over the banks and within approximately eight hours reached their crest. Highways were flooded, bridges were under water, homes were under several feet of water, business establishments were heavily damaged, house trailers were washed away. In a few instances homes were carried off, automobiles were wrecked and washed downstream. Communications were cut off and no telephone or radio contact could be made with stricken areas. Contamination of water supplies quickly resulted. Within twelve hours the waters had receded sufficiently to permit passage of vehicles.

The Director of Public Health of the Dickenson-Russell-Wise Health District was in his office on the morning of the 29th to consult with his chief sanitarian on other problems when word came that the floods were imminent. He immediately got in contact with local and State police and with the authorities in the villages and towns likely to be involved. Instructions were given for precautions to be observed to safeguard life and health. When communications were broken the State Police routed troopers into villages and towns by roads known only to the natives. With men equipped with walkie-talkies strategically placed, they were able to maintain contact with the outside.

The responsibilities of a health department, great at all times, become manifold under such conditions. The director issued immediate instructions as to the use of water that was available and gave directions for chlorinating local supplies. At such a time the trained sanitarian is all-important. The available men were called in and appeals were made for additional sanitarians from other areas of the State. Typewritten instructions were given these men:

1. Record the name of the town.
2. Make contact with town officials.
3. Make a quick survey of areas as to local conditions.
4. Recheck involved restaurants; especially check those that want to re-open.
5. Check school water supplies and sewage disposal, especially rural schools.
6. Check privies, trash, basement water, dead animals.
7. Check trailer parks that are being re-opened.
8. Check homes that have been flooded.
9. Record sanitation problems that are found to need follow-up. Give person's name, address, and location.

The immediate need for drinking water was cared for by the splendid cooperation of soft drink bottling plants which bottled and transported potable water and by dairies which sent in milk tanks filled with drinking water.

Effective work was done by the sanitary engineers in rapidly restoring public water supplies which had become polluted through contaminated surface waters or as the result of broken mains. Additional chlorination was carried out, pipes were repaired, the treated water was held in the distributing lines for a safe period and the mains were flushed before the public was assured that their supply was safe.

After the waters subsided and people were able to enter their flooded homes and places of business, instructions were broadcast and posted on how to rehabilitate buildings damaged by flood waters. Helpful suggestions were given to home owners on how to correct insanitary conditions caused by the flood. These instructions, brief and practical, were given:

REHABILITATION OF HOMES DAMAGED BY FLOOD WATERS

"1. Thoroughly scrub all surfaces that were covered by water using a detergent or soap compound.

"2. Rinse all surfaces thoroughly with clear water.

"3. Go over all surfaces with a sanitizing solution of either lysol or chlorine.

"Products such as Chlorox, Fleecy White, B.K., Lo Bax, H.T.H., or any other chlorine compound available can be used in making the sanitizing solu-

tion. This solution should be approximately 200 parts per million. Follow directions on containers for correctly mixing this solution.

"This same procedure should be followed with all cooking and eating utensils.

"After the home has been thoroughly cleaned and sanitized, heat should be restored in the building to facilitate drying before occupying.

"Do not follow this procedure with fabrics or upholstery that are subject to bleaching action. This kind of material and furniture can be cared for only by air drying and exposing to sunlight."

SUGGESTIONS FOR CORRECTING INSANITARY CONDITIONS CAUSED BY FLOOD

"Before using water from a system flooded, such as wells or springs, the water should be boiled for *20 minutes* and then stored in clean containers after shaking water well to replace oxygen lost in boiling and adding a pinch of salt to restore normal taste.

"When boiling is not practical, add 6 to 10 drops of Chlorox or Fleecy White and let stand for *15 minutes* before using.

"All springs and wells should be thoroughly cleaned inside and around the system as far as possible. Add 1 quart of Chlorox or Fleecy White to 5 gallons of water, then flush the system out with the solution. Where pressure systems are involved this solution should be held in pipe lines for 12 hours. Then open spigots and let the water run until taste and odor is practically normal.

"All septic tanks and pit privies should be put in sanitary condition as soon as possible.

"FOR FURTHER INFORMATION CALL YOUR LOCAL HEALTH DEPARTMENT"

The Health Director sent the following letter to every doctor in his area:

Dear Doctor:

During the floods recently experienced in this area several community water supplies were contaminated with polluted flood waters. Every possible effort was made to warn the people of the danger associated with the use of such water and prompt action was taken to restore the various water supplies to normal conditions. However, it is only reasonable to assume that such precautions were not one hundred per cent effective.

Typhoid Immunization Clinics are being scheduled throughout the area and following our usual policy, Typhoid Vaccine will be provided you, without charge, on your request.

As you are aware, factors of incubation time and time required for the development of a protective level of immunity in primary immunizations will prevent complete protection of previously unimmunized persons who were exposed to typhoid organisms in the recent disaster.

If cases of typhoid and/or other enteric diseases do develop as a result of any of the above factors, we hope to be able to properly investigate and control further spread of such illnesses. We can best assist you in this effort through your early report of any suspected case of typhoid or unusual incidence of other diseases that might be associated with the flood. We thank you for your cooperation.

Sincerely,
Director

Since it was deemed wise not to interrupt routine health practices and clinics, four physicians and eight nurses were sent to Wise County Health Department, Norton, Virginia, to form four teams for the administration of typhoid vaccine and to render such other services as might be helpful within the Dickenson-Russell-Wise Health District. After the first week one physician and two nurses remained to complete the typhoid vaccine administrations.

Monthly Report of Bureau of Communicable Disease Control

	Feb. 1957	Feb. 1956	Jan.-Feb. 1957	Jan.-Feb. 1956
Brucellosis	3	1	3	1
Diphtheria	0	9	0	10
Hepatitis (Infec.)	51	50	82	112
Measles	417	1575	728	2532
Meningococcal Infections	4	12	13	19
Meningitis (Other)	9	8	23	23
Poliomyelitis	3	2	4	2
Rabies (In Animals)	28	41	58	73
Rocky Mountain Spotted Fever	0	1	0	2
Streptococcal Infections	664	509	1094	1086
Tularemia	4	1	13	2
Typhoid Fever	4	1	8	1

Mental Health . . . .

Problems of a One-Day-a-Week Mental Health Clinic in a Rural Community

JOHN E. NARDINI, M.D.

Loudoun County is an agricultural community bordering the Potomac River in the extreme northeast section of the State of Virginia, with a population of approximately 23,000. The Loudoun County Guidance Center is located in Leesburg, 30 miles from Washington, D. C. Approximately two years prior to the organization of the present clinic, the county supported a clinic consisting of a psychologist and a social worker. The present staff, functioning under the auspices of the Commonwealth of Virginia, began in June 1955 with a psychiatrist clinical director, followed by a clinical psychologist and, by July 23, 1955, reached the present full complement of the above, plus a psychiatric social worker and a clerk typist.

The new clinic was sparked by an active and able advisory board and encouraged and assisted by Dr. Joseph E. Barrett, the Commissioner of Mental Health, and his staff. The clinic began with four patients remaining from the county clinic. At first, referrals were scant and many appointments broken because of poor referrals from the community, and poorly chosen patients who were unable to benefit from clinical assistance. New patients referred from the court, the first four months, represented about 30% of the total for the period. While these were not suitable patients for continued treatment, they served a highly valuable purpose of establishing what eventually became a mutually beneficial and excellent working relationship with the local court.

A major problem was one of adequately announcing the existence and capabilities of the present clinic. Excellent cooperation and assistance was given by the county health officer. County newspaper accounts were handsomely prepared and highly informative to the people of the widespread community. Active contacts were made with significant people of the community, namely, the trial justice and judge of the juvenile court, superintendent and supervisor of schools, school principals, counselors, teachers and the visiting teacher, supervisor of county welfare, individual physicians and ministers. In addition to these individual contacts, talks were presented by members of the staff to the County Medical Association, the Ministerial Association, The Business and Professional Women's Club, The League of Women Voters, the Women's Club of Loudoun, The Educational Association, groups of elementary school teachers, and Parent-Teacher Associations. A well attended open annual meeting was held in February of 1956, at which the staff presented progress of the clinic to an earnest, interested, and sympathetic audience. A pamphlet was published and circulated to explain vital information regarding the clinic, and some description of the various indications for visiting the clinic.

As the weeks and months passed by, the flow of patients increased so that by June 1, 1956, 80 patients had been seen for a total of 420 interviews. Referrals were made from schools (23), family and self (22), courts (15), physicians (11), Health Department (7), Institutions and Department of Public Welfare, one each. The sexes were about equally divided, 37 were females and 43 were males. Adults comprised 31 and children 49. Diagnostic categories have extended through the complete spectrum from major organic and functional psychosis to mild neuroses and personality disorders.

Although the clinic was organized to accommodate all levels, and scales were purposely set low, visits were so regularly attended that approximately $600, or twice the amount of money originally estimated, has been collected during this period of time. The clinic was established on the second floor of the County Health Building and through the excellent efforts of the advisory board, and careful budgeting, the four rooms were readied in excellent condition. Two dictating machines were borrowed from outside sources and have been kept exceedingly busy. It was very early recognized that good referrals were necessary if waste of time was to be avoided due to broken appointments. Hence, attempt was made to contact referrals prior to arrival to evaluate their need, interest and motivation, in addition to reaffirming the appointment. A one day per week clinic must have every possible appointment kept if the limited time is to be used most effectively. In this same connection, it has been necessary to pay careful attention to advance scheduling. Schedules were generally made only one week in advance and occasionally two weeks in advance.

Attempt was made to keep as many patients as possible in a treatment situation and still see them

JOHN E. NARDINI, M.D., *Director, Loudoun County Guidance Center, Leesburg, Va.*

Approved—Commissioner, Department Mental Hygiene and Hospitals.

as often as required by their condition. Considerable difficulties have been experienced in allowing available time to handle cases of emergency nature. Such problems as acute psychoses, court problems, over-anxious or depressed patients, or urgent school problems would occur episodically. If time were allowed for these, and nothing occurred, this amounted to time wasted since other known patients were not scheduled. Cancelled appointments became increasingly infrequent as the year went on. Cancelled appointment times could be used for records, but more effective work could be achieved if separate times were set and maintained for both records and conferences. Schedules were made before the end of each working day and the clerk-typist employed from the community would contact the patients, or families, during the week by phone or mail. In addition during the week, calls would come into the Health Department office requesting appointments. Urgent calls would be fit in, when possible, at designated times in the schedule left with the Health Department. Other cases were contacted on the next working Saturday when the clinic was open and appointments were made.

Some delay necessarily occurred in handling correspondence in view of the inactive week interval. This made it necessary to read, digest, and prepare replies promptly each working day. At times it was necessary to formulate a clinical report based on social history, psychologic tests and psychiatric examination made on the same day, and deliver a verbal report to a referring source such as a judge, physician or teacher, on the same day, and follow with a written report a week later. This procedure was usually satisfactory and tended to reduce the cumbersomeness of the time interval. Somewhat greater care than usual needed to be exercised to safeguard the confidentiality of records and even the identity of those who desired to use the clinic facilities. All small communities tend to evince much greater interest in the activities of its members than a more heterogeneous metropolitan group. In this connection there might appear to be more advantage to the professional staff being drawn from other communities.

As in all beginning clinics, it was essential to gradually acquaint referring sources with the limits and possibilities of therapeutic work with referred patients. After the first barrage of chronic alcoholics, mental defectives, sexual deviates and relatively incorrigible court problems, the referred patients gradually developed into a good assortment of emotional disorders amenable to specific therapy. Work with the local court has been quite close and effective, and many patients have been referred to the clinic for psychiatric evaluation prior to commitment or recommendation for institutionalization and, in some instances, prior to recommending indicated punishment or sentence. Some difficulties have been experienced in regard to liaison with specific teachers, due to the operation of the clinic on Saturday. The teachers are naturally attending to their personal weekend duties and activities. All members of the clinic at first found some difficulty in promptly organizing their mental processes at the beginning of the clinic day, following the interruption of six busy interval days in other activities. Some help was afforded in this regard by devoting the first hour to dictating and reviewing records. However, after a time it was surprising how rapidly the association could be made regarding patients at the clinic, in spite of the long span of a week in between. Scheduling presented certain difficulties and it became necessary to plan one and two weeks in advance. Times for conferences and discussions regarding individual patients have been something less than adequate and have made it necessary to utilize every available moment.

Several special jobs of merit have been accomplished: Special classes for the mentally retarded students, up to age 14, have been established in the county. These students were all screened by the clinic and studied to rule out poor school performance that might be secondary to personality difficulties rather than primary inate mental deficiency. It has been reported by the teacher in charge of the class, and teachers in charge of other classes from which the retarded students were drawn, that both the retarded class and the class from which they were drawn have profited immensely. A number of patients have been kept out of mental hospitals and the colony for mental defectives based on accurate clinical diagnosis and, in some cases, supportive treatment for the patient and his family. On a few occasions there has been some follow-up treatment on patients who have been discharged from mental hospitals and it is believed that their readjustment in the community has been enhanced. Treatment patients have numbered approximately 38 and the remainder have been diagnostic in one category or another. At the time of this writing, a waiting list has been built up for treatment problems, and it would appear that the clinic is off to a good start and is being quietly and effectively used by the various members of the community.

The Medical Society of Virginia . . . .

Council Minutes

The mid-winter meeting of the Council of The Medical Society of Virginia was called to order by Dr. James D. Hagood, President, at 1:00 p.m. on February 13, 1957, at Society Headquarters. A quorum was present. Attending were Dr. James D. Hagood, Dr. Harry C. Bates, Jr., Dr. James P. King, Dr. Reverdy H. Jones, Jr., Dr. Harry J. Warthen, Jr., Dr. Mack I. Shanholtz, Dr. Fletcher J. Wright, Jr., Dr. A. A. Creecy, Dr. Walter P. Adams, Dr. Benjamin W. Rawles, Jr., Dr. Louis P. Bailey, Dr. Frank A. Farmer, Dr. Harold W. Miller, Dr. David W. Scott, Jr., Dr. James P. Williams, and Dr. J. D. Zylman. Attending also were Mrs. Lee S. Liggan, President of the Woman's Auxiliary to The Medical Society of Virginia, Mrs. John R. St. George, President-Elect of the Auxiliary, Dr. W. Linwood Ball, Society Headquarters Building Committee, and Mr. Robert C. Duval, Jr., Attorney for The Medical Society of Virginia.

Mrs. Liggan reported on the progress and achievements of the Auxiliary and outlined its objectives.

A brief report on the Auxiliary's organizational efforts was presented by Mrs. St. George. Great strides have been made in recent years and additional component auxiliaries are expected to be organized before the year's end.

Council was then advised of efforts to form a new component society in Portsmouth. It was reported that Portsmouth physicians might soon petition Council to separate them from the Norfolk County Medical Society and grant a new charter. This action apparently hinges on such local problems as group insurance programs, etc. A formal request from a Portsmouth committee was read asking that Council authorize the Executive Committee to act on the petition should it be made prior to the annual meeting in October. After some discussion, Dr. Hagood decided to consider the matter later in executive session.

Dr. King reported the activities of his Society Headquarters Building Committee and requested Dr. Ball to describe the various locations which had been considered as possible sites for the Society's new home. Dr. Ball stated that the Committee was of the opinion that a lot located in block 40 of Windsor Farms was the ideal location for the building and offered by far the greatest possibilities.

Mr. Duval acquainted Council with the various restrictions to be considered before building in Windsor Farms, and stated that there was some question as to whether or not the proposed building could safely be erected in view of certain technical objections.

Dr. Scott moved that the Executive Committee be granted authority to act should subsequent developments indicate that the property can be used for an office and headquarters building for the Society. In the discussion of the motion it was suggested that this might tie the hands of the Executive Committee in the event the technical objections to the proposed use cannot be removed.

A substitute motion was then offered which would have the Society purchase the property as a safeguard pending further developments. After some discussion the substitute motion was lost.

An amendment was then offered to the effect that the Executive Committee be granted authority to purchase the land at a price to be agreed upon by the owner and Dr. Ball's Committee, provided (1) that the deed conveying the land contain a covenant on the part of the Richmond Foundation that it can be used for an office and headquarters building for the Society, (2) that Lawyers Title Insurance Corporation provide in an owners policy an assurance that the land can be used for such purpose, or (3) that other satisfactory assurances be given that the land can be so used. The amended motion was unanimously adopted.

Dr. King wished to know whether or not the Executive Committee could authorize construction of the headquarters building should the lot be purchased. After some discussion, it was decided that plans, etc., should first be referred to the entire Council.

Dr. Williams told of progress in the field of hospital-physician relationships and reported that the Society had been well represented at a meeting of a special committee appointed by the Virginia Advisory Legislative Council. A question was raised as to whether or not any change in our present Medical Practice Act could be justified. Mr. Duval stated that it might be necessary to make one or two minor changes in the Act in order to clarify the position of state institutions and teaching hospitals.

A statement of principles for hospitals and physicians, drawn by Mr. Duval and approved by the

Sub-Committee on Hospital-Physician Relationships, was read for the information of Council. It was made clear that an up-to-minute report on the situation would be made to the Society's House of Delegates in October.

Dr. Hagood advised Council that a VALC Committee was considering the possibility of licensing physical therapists. It was mentioned that Dr. K. D. Graves, Secretary of the State Board of Medical Examiners, believed the interests of the therapists could best be served by having their own Board under the jurisdiction of the Department of Professional and Occupational Registration. It was the opinion of several present that physical therapists probably should be covered by the State Board of Medical Examiners.

A motion was introduced which would have the Society support the recommendation of Dr. Graves. After some discussion, a substitute motion was made to refer the question to the Society's Legislative Committee. The substitute motion carried.

A report from the Insurance Committee was presented by Dr. Farmer, who stated that the professional liability program was proceeding nicely and had made marked progress during the past eleven months. It was reported that premiums under the Society program had remained virtually the same although premiums of companies belonging to the National Bureau of Casualty Underwriters had increased in at least one major category. Dr. Farmer went on to report that his Committee had decided to postpone action on proposed group life, major hospital and business overhead plans until further study could be made.

Considered next was the matter of selecting the dates and the headquarters hotel for the 1958 Annual Meeting (Richmond was selected during the Annual Meeting in October). After reviewing the available dates, it was moved that the meeting be held at the Jefferson, October 12-15, 1958.

The question was then raised as to whether or not the Jefferson Court could still be used for technical exhibits. A call to the Jefferson brought assurances that the Jefferson Court would be available.

Council was then advised that a special appropriation might be necessary to cover expenses in connection with a Conference on Nursing Education and a stepped up program planned by the Polio Advisory Committee. An appropriation, if needed, was authorized with the recommendation that it be approved by the President.

Mr. Duval reported that he was in the process of drawing up a lease on the birthplace of Dr. Walter Reed. The property is to be leased, in accordance with a resolution adopted by the House of Delegates in October, to the Walter Reed Community Improvement League of Gloucester. He stated that the League had mentioned the need of a new roof in the very near future, and the Society would probably wish to give this serious consideration. It was the consensus that the Society was obligated to replace the roof and this item should be covered in the 1957-1958 budget.

Dr. Rawles advised that Blue Cross-Blue Shield was anxious to cooperate with the Society in furthering good relationships with physicians. It was pointed out that the House of Delegates approved a recommendation that a closer relationship be sought between the medical service plans in the State and Virginia physicians, and had recommended that the Society seek ways and means of nominating a certain number of physicians for appointment to Blue Cross-Blue Shield Boards.

A motion was made that the President appoint a special committee to serve with a similar committee of Blue Shield in working toward better Blue Shield relationships. An amendment was offered which would have the Committee work with all State Blue Shield plans. The motion as amended was adopted.

Considered next was the matter of appointing a registered agent for the Society. All corporations in existence on January 1, 1957, must establish a registered office and registered agent or lose its charter. It was moved that the Executive Secretary-Treasurer be designated the registered agent of the Society and the Headquarters Building at 1105 West Franklin Street, Richmond, be designated the registered office. The motion carried.

The Medicare Program was discussed at length and it was brought out that several members had requested a survey be made of all component societies in order to determine their thoughts and suggestions in connection with the program. It was mentioned some delegates did not believe that component societies had been sufficiently informed on the program prior to the Annual Meeting in October. Also pointed out was the fact that it would be necessary for the Society and the Department of the Army to renew the Medicare Contract in June.

A motion was introduced calling for a survey of component societies in order to secure their thoughts on the program. The survey would be made before further negotiations with the Department of the Army. The motion carried.

A letter from the Secretary of the Mid-Tidewater

Medical Society suggested that York County be included in the Williamsburg-James City County Medical Society. The letter pointed out that physicians in York County apparently preferred membership in the Williamsburg Society. It was moved that, with the approval of the Williamsburg-James City County Medical Society, York County be included in its jurisdiction. The motion carried.

Considered next was the advisability of publishing a directory and information handbook similar to the one published by the Georgia State Medical Association. It was the consensus that the matter should be postponed for further study.

The President then called for further consideration of the request that the Executive Committee be authorized to act on a petition for a separate component society which might be received from Portsmouth physicians before the Annual Meeting. There was some feeling that perhaps the request should be made by the Norfolk County Medical Society. However, it yas moved by Dr. Adams that the Executive Committee be authorized to act on the petition should it be received before the Annual Meeting. The motion was adopted.

There being no further business, the meeting was adjourned.

ROBERT I. HOWARD
Executive Secretary-Treasurer

Conference on Nursing Education

The importance of three year hospital RN training schools was emphasized during a Conference on Nursing Education sponsored by The Medical Society of Virginia and held in Richmond on February 19, 1957.

A special committee of the Society met at the conclusion of the Conference and adopted a resolution which stated that "It is the consensus of this hearing that hospital RN training schools in the State of Virginia have been and remain a necessity, and that further, The Medical Society of Virginia, through its existing Committee to Confer with the State Board of Nurse Examiners, do everything in its power to help the nursing situation in Virginia."

The Conference was attended by more than 75 physicians, nurses, and hospital administrators, and featured talks by Dr. Thomas Hale, Jr., Director, Albany Hospital, Albany, New York and Miss Mabel Montgomery, Secretary-Treasurer of the Virginia State Board of Nurse Examiners.

Dr. Hale stressed the need of more practical experience in nursing education and pointed out that nothing can quite take the place of actual work experience. He stated that, in his opinion, nursing educators should reverse the trend which is leading to the down grading and possible abolishment of three year nursing schools. Dr. Hale also called for a return to the "earn as you learn" theory, and a closer look at the current policy of promoting collegiate schools at the expense of hospital schools. He also questioned the shift of emphasis to sociology and psychology.

A number of suggestions were advanced by Dr. Hale as possible answers to the problem. He recommended that hospitals seriously consider the raising of salaries in order to successfully meet competition; that medical societies and hospital associations actively support good legislation in the field of nursing; that better use be made of hospital personnel in order to relieve nurses for the more essential jobs; that practical nursing be recognized and allowed to come into its own; that medical societies seek representation on State Boards of Nurse Examiners; that more money be spent for proper dormitories and recreation facilities for nursing students; that the medical profession learn not to expect quite so much from nurses as it has in the past and that some consideration be given to making foreign nurses available during periods of emergency.

Miss Montgomery defended the upgrading of educational standards by pointing out that students not receiving the best possible education often find themselves unable to pass the State Board examination. It was mentioned that in 1956 12 per cent of the graduate nurses taking the Virginia examination failed. According to Miss Montgomery, Virginia's high rate of failures would seem to indicate the need of raising standards of student selection and instruction.

Among the suggestions offered by Miss Montgomery, to combat the shortage of nurses, was a plea that nurses be given the recognition they so rightfully deserve. They should know that they are co-workers with physicians and are members of the over-all health team, dedicated to the welfare of the patient. Also recommended was the stabilization and better utilization of nurses and other nursing personnel as a means of securing maximum effectiveness; the preparation of more registered professional nurses for teaching, administrative and supervisory positions, and a determined effort to provide an increase in nursing school enrollment at all levels.

A number of physicians, nurses, and administrators then discussed the pros and cons of the problem, and it was at the conclusion of their remarks that the special conference committee met and adopted the resolution calling for a strengthening and continuation of the hospital RN training schools.

Among those participating were Dr. John R. Mapp, Mrs. Evelyn Bacon, Miss Roy C. Beazley, Miss Sybil McLean, Miss Margaret G. Tyson, Dr. William P. Sanger, Mr. Ed. Phillips, Mr. Robert Thomas, Miss Marguerite Nicholson, Miss Grace Ricks, Miss Katherine Gary, Dr. H. L. Denoon, Jr., Dr. Russell V. Buxton, Dr. William Johns, Dr. Benjamin W. Rawles, Jr., Dr. Prentice Kinser, Jr., Dr. John W. Devine, Jr., Dr. H. McKeldon Smith, Dr. J. M. Emmett, and Dr. Marcellus A. Johnson, III.

"Meals on Wheels"

In every community there are old or infirm people living alone, who time after time must be readmitted to hospitals or other institutions simply because they are unable to obtain proper food or care for themselves at home. Many are physically weakened, suffering from malnutrition and mentally depressed because of a lack of good food and human contacts.

The Philadelphia, Pennsylvania "Meals on Wheels" program, currently entering its fourth year of operation, is providing many of these forgotten oldsters in the city with the comfort of two nourishing meals a day, five days a week, delivered to their homes by a friendly visitor. The program was started in January 1954 by the Lighthouse, a Red Feather Settlement House in a congested industrial section of Philadelphia. The section contains approximately 80,000 population; 8,000 over 65 years of age and 800 over 80 years of age. Visiting nurses, social workers, and local hospitals had noted that many of these older individuals living in the area were consuming grossly inadequate diets, and through their interest the program was initiated. Volunteers at the Lighthouse package and personally deliver a thermos-insulated hot meal for noontime and a cold meal to be saved for supper to selected clients within a radius of about 2 miles around the Lighthouse. Meals are prepared by a professional salaried cook at the Lighthouse, and present a varied menu as well as being nutritionally balanced; delivery routes are carefully planned so that the last hot meal served is no more than sixty minutes old.

Potential clients are referred to the service from the Visiting Nurse Society, from local hospitals, by social workers at the Lighthouse, and from the Department of Public Assistance.

After being screened by a worker at the Lighthouse on the basis of need and ability to pay, applicants are given a physical examination by participating physicians after consent has been obtained from their own physician, and are tested psychologically by a consulting sociologist from the University of Pennsylvania. A dietary history is also taken and evaluated.

The majority of clients on the program are aged and infirm, or with a residual disability; and need the service on a continuing basis; many are receiving public assistance. In a few cases, however, post-operative or convalescent patients are temporarily served following discharge from the hospital, and the sponsors feel that the program may have value in shortening the necessary length of hospital stay for these patients.

All clients are charged a weekly fee, which varies from $2.00 to $5.00 according to their ability to pay. The remaining cost is borne through grants received by the Lighthouse.

The effects of the program on patients' physical status and psychological outlook are being carefully evaluated. At intervals of about 3 months, patients are re-evaluated medically and the psychological testing is also repeated. Results thus far, although not formally analyzed, indicate a definite improvement in clients' physical and psychological well-being.---*Chronic Illness Newsletter*

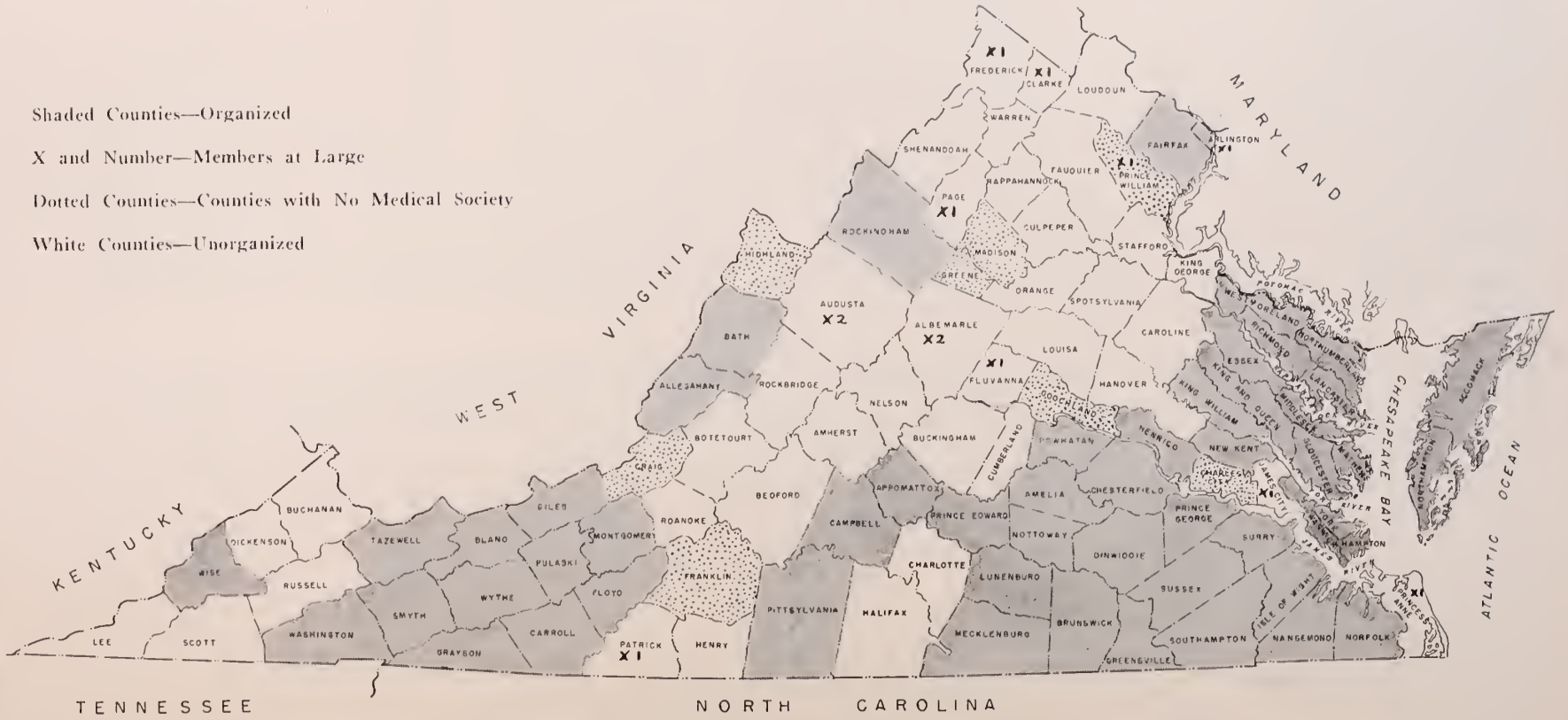
MAP OF COUNTIES OF VIRGINIA SHOWING AUXILIARY ORGANIZATION

Shaded Counties—Organized

X and Number—Members at Large

Dotted Counties—Counties with No Medical Society

White Counties—Unorganized



Current Currents

THE MEDICAL SOCIETY OF VIRGINIA and its 46 component societies will officially launch an all-out drive against polio on April 15. The drive, concluding on June 1, will allow sufficient time for everyone to receive the first two inoculations of the series.

While the program will urge immunization of everyone between six months and forty years of age, particular attention will be given those in the 20-40 age group. The susceptibility of those in this bracket has been proven and it is vitally important that they be immunized if maximum results are to be obtained.

The mechanics and supervision of the drive in each locality will be left entirely to the local society. While the Polio Committee hopes that the important role of the private physician will be stressed, it believes that each society must make its own decision as to whether mass clinics, etc., are advisable.

This all-out drive to eradicate polio provides a wonderful opportunity for every physician, no matter what his speciality, to perform the greatest possible public service.

VOLUNTARY HEALTH INSURANCE is becoming increasingly important in the overall medical care picture. Twenty years ago, the number of persons covered by some form of health insurance was only 1.5 million. When the drive was on for compulsory health insurance in 1949, just over 50 million persons were covered by voluntary insurance. The medical profession contended then that voluntary coverage would expand, thus obviating the need for government insurance. The figures below prove this was a good estimate of the situation:

110,000,000 persons now covered for hospital charges.

92,000,000 persons now covered for physicians' charges for surgery.

55,000,000 persons now covered for physicians' medical charges in hospitals.

10,000,000 persons now covered for physicians' home and office call charges.

10,000,000 persons now covered for major medical expenses (catastrophic) compared with 1,200,000 covered in 1953.

THE NATIONAL SAFETY COUNCIL reports that approximately 4½ per cent of all fatal accidents on the highways are caused by driver fatigue and going to sleep at the wheel.

MEDICAL EDUCATION WEEK—APRIL 21-27

THE A.M.A. ANNUAL MEETING will be held in New York City from June 3-7. Approximately 18,000 physicians from all over the country are expected to participate in the world famous "short course" in post-graduate medical education. Focal point of the scientific program will be the Coliseum—New York's new exhibition hall—with four floors devoted to technical and scientific exhibits.

An outstanding scientific lecture program has been arranged. On Monday morning, June 3, there will be a review of recent progress in surgery while the afternoon session will deal with recent advances in medicine. Tuesday morning's general meeting will feature a discussion on the use and abuse of mood-altering drugs in daily practice.

Formal section meetings will run from Tuesday afternoon through Friday morning. Many of the sections will combine to present special symposiums and panel discussions.

Registration officially opens at the Coliseum on Monday at 8:30 a.m. and closes Friday noon. Advance registrations will be accepted Sunday from 12:00 noon to 4:00 p.m. The exhibit hall will be open to "doctors only" on Tuesday and Wednesday mornings to give physicians an opportunity to circulate more freely among the technical and scientific exhibits. For your comfort, the new Coliseum has many facilities, including air conditioning, escalators, a cafeteria, and snack bars.

YOU WILL BE SURPRISED to learn the number of potential beneficiaries of federal medicine. Today nearly one out of every four persons, including over 22 million veterans, is eligible to receive at no cost to them some degree of medical care from the Federal Government. Some of the greatest activity in the health field has involved laws and amendments to laws that widen the scope of medical care for federal beneficiaries. Just check the following:

22,599,000 living veterans as of January 1, 1957.

5,200,000 military personnel and their dependents.

300,000 beneficiaries of the Public Health Service, including 200,000 seamen, but excluding beneficiaries of Federal Employees' Compensation Act and Indians.

5,100,000 public assistance recipients.

370,000 Indians and Alaskan natives receiving care in 56 federal hospitals or in private facilities under contract.

4,000,000 beneficiaries of the Federal Bureau of Employees' Compensation Act (at-work injuries only).

CONTRIBUTE TO A.M.E.F.

Woman's Auxiliary....

President ..... Mrs. Lee S. Liggan, Irvington
President-Elect ..... Mrs. John R. St. George, Portsmouth
Vice-Presidents ..... Mrs. Maurice Bray, Suffolk
Mrs. J. Rollins McGriff, McLean
Mrs. H. H. Howze, Norton
Recording Secretary ..... Mrs. James R. Grinels, Richmond
Corresponding Secretary
Mrs. A. B. Gravatt, Jr., Kilmarnock
Treasurer ..... Mrs. Robert H. Detwiler, Arlington
Publication Chairman ..... Mrs. Paul Pearson, Warsaw

Norfolk.

The Auxiliary to the Norfolk County Medical Society has been quite active since the first meeting of the fall season. The September meeting was a combination business, luncheon and fashion show at the Norfolk Yacht and County Club, with Mrs. Harry Frieden chairman of the program.

Regular business meetings were held in October, November and January in the homes of members, with guest speakers, followed by a light lunch. In October, we heard a Canadian Naval Officer from NATO, in November a representative of the local telephone company spoke on "Your Voice is You", and at the January meeting, Dr. William Gibbs spoke on "Modern Concepts of Alcoholism".

One of the big events of the year was the annual Christmas tea for all the student nurses at Norfolk and Portsmouth hospitals. This year we entertained about 175 students with a play put on by the Auxiliary members, entitled "HE is Having a Baby." This entertaining farce had its setting in the waiting room on any maternity floor. Needless to say the audience enjoyed seeing positions reversed.

In January, the Auxiliary sponsored a card party and childrens fashion show to raise money for our newly established Nurses Scholarship Fund. This scholarship will be given this fall for the first time to a qualified member of one of the 8 Future Nurses Clubs in our local High Schools. Mrs. Henry Boone and Mrs. Richard Reed were chairmen of the fashion show, and Mrs. Jerome Gross chairman of the card party. Mrs. George Hollins is chairman of the Future Nurses Clubs and is working closely with these active groups.

The social highlight of the year is the annual Sweetheart Dinner Dance for our doctors. Mrs. Howard Kruger, president of the Auxiliary, Dr. Kruger, Mrs. James Guy Price, chairman of the dinner-dance committee, Dr. Price, and Dr. Mallory Andrews, President of the Norfolk County Medical Society, and Mrs. Andrews were in the receiving line to greet over 100 doctors and their "sweethearts" at the Hague Club on February 16th.

Realizing that the wives of residents and interns in our local hospitals may be strangers in the community, the Auxiliary invited them to a coffee hour at the home of Mrs. W. B. Wiley.

Mrs. M. I. Krischer
Publicity Chairman

Warwick-Newport News.

This Auxiliary held its regular monthly meeting and luncheon on January 23rd at the home of Mrs. F. N. Thompson, with Mrs. Frank Beazlie, president, presiding. Tentative plans were announced for the annual field trip for members of the Future Nurses Clubs in the local High Schools to Louise Obici Hospital in Suffolk.

Following the business session, Mrs. Waverly R. Payne gave an interesting account of her recent trip abroad with the 350th Commemorative Party of the Jamestown Festival.

Mrs. John Hatten
Publicity Chariman

Richmond.

The regular monthly meeting of this Auxiliary was a luncheon held at the Branch House on February 15th. Dr. Paul Sanders, Editor of The Southern Planter, was guest speaker. Mrs. Merritt W. Foster, Jr., and Mrs. Thomas Chalkley were chairmen for this meeting.

The Annual Doctor's Day Dance was held at the Country Club of Virginia on February 15th. A reception and dinner preceded the dance. Mrs. Gilman Tyler was chairman of arrangements.

Edith Brooks (Mrs. George K., Jr.)
Publicity Chairman

Northern Neck.

The mid-winter luncheon meeting of this Auxiliary was held in Warsaw on January 29th. At this time, Mrs. E. L. W. Ferry was made an honorary member.

A special fund raising drive has made possible a contribution of $50.00 to the Leigh-Hodges-Wright Memorial Fund.

Mrs. A. B. Gravatt, Jr.
Publicity Chairman

President's Message . . . .

1957 Poliomyelitis Vaccination Drive

PERHAPS never before in history has the medical profession had the opportunity to wipe out a major disease so quickly and so completely as we can now do with poliomyelitis. The preliminaries are over—what we now need is widespread and immediate needle work. The Salk vaccine is *safe,* it is effective up to 90%, and now for several months it is available in adequate or nearly adequate volume.

Our chief present problem is time and public apathy. Within three months the 1957 polio season will be with us in Virginia. By that time, our goal is to protect everyone in the State between the ages of 6 months and 40 years with at least two injections of vaccine. Some may express surprise at extending the age to 40, but recent years have shown an increasing number of victims over 20. During 1956, fortunately a light polio year for Virginia, of the seven deaths recorded in the State, four were of persons over 20 years of age.

At a large meeting in Chicago on January 26, 1957, the American Medical Association Committee on Poliomyelitis endorsed a Nationwide Vaccination Drive. The Poliomyelitis Committee of The Medical Society of Virginia is now engaged in such a drive. The Committee expects each locality, under the leadership of the local medical society, to set up plans for reaching every one under 40 in the community. We have every assurance that cooperation in this effort will be forthcoming from many groups—local health departments, school health officials, civic clubs, etc. The Statewide Committee feels that each locality is best able to judge for itself what is the best method for reaching the largest number of persons locally. However, both the Committee and the State Department of Health stand ready to assist with advice and other help when called upon.

The dates of April 15 to June 1 have been set. These dates will permit school children to receive two injections before schools close and will also permit time for the development of antibodies before the onset of the disease season.

Dr. Shanholtz, State Health Commissioner, has offered all of the facilities of his department in this drive.

J. D. Kagood

President

Editorial....

Arterial Embolectomy

RECENT advances in vascular surgery compel a renewed interest in the surgical approach to arterial embolism. Furthermore, cardiac surgery and the surgery of thrombotic and aneurysmal disease of the aorta have led to an increase in embolic accidents. An attitude of conservatism and apathy towards acute embolic occlusion of major arterial pathways is rarely defensible since, even if viability of the limb is assured, chronic vascular insufficiency may result. The well trained, aggressive vascular surgeon can now achieve a patent arterial pathway in a high percentage of cases. For these results to be meaningful, however, a viable extremity must be recovered and the patient survive. The serious cardiac disability which constitutes the basic etiology in many of these patients contributes greatly to the final high mortality figures.

While of great importance the time interval need no longer constitute the decisive factor. If on examination the limb appears viable, the embolus together with propagated thrombus can yet be removed and function restored despite a prolonged delay in instituting surgery.

The diagnosis of arterial embolus usually presents no difficulty although differentiation from acute arterial thrombosis may sometimes be impossible. In the case of thrombosis, symptoms are less dramatic since some collateral circulation has already developed in response to the partially obstructing arteriosclerotic process. If the surgeon is prepared to cope with the situation the mistake in diagnosis is not serious and the arterial pathway can be reconstructed by vascular graft or thromboendarterectomy. Indeed, emergency operation should be undertaken for some patients with acute thrombosis.

A "silent" dissecting aneurysm may present first with symptoms suggesting an arterial occlusion in the lower extremities. The correct diagnosis, if suspected, can usually be made, since clinical examination and oscillometry indicate that the arterial obstruction is not complete, and that bilateral changes are present. Bizarre neurologic signs add supporting evidence. The suspected diagnosis is confirmed by the appearance of a widened aortic shadow on chest roentgenogram. Further detailed inquiry may then elicit minor symptomatology in the more cephalad regions of the body.

Acute thrombophlebitis with arterial spasm may occasionally cause some diagnostic confusion. The mottled cyanosis, early swelling and greater tenderness constitute differentiating features.

A consideration of the physiologic events following lodgment of the embolus permits a more rational therapeutic approach. The sudden obstruction causes a drop in distal arterial pressure below the critical closing pressure of small arteries (Burton's law), so that collateral anastomoses fail to open. A sympathetic nerve block opportunely performed at this stage relaxes the vasomotor tone and may lower the critical closing pressure of small arteries sufficiently to permit collateral flow into the obstructed main artery. If the collateral flow is meager, a thrombus propagates readily down the main arterial pathway, occluding more and more collateral branches as it extends. If surgery is delayed even briefly intravenous heparin in adequate dosage should be administered to retard the progress of the thrombus. This measure has all too frequently been overlooked, even when transportation of the patient is being undertaken to a distant center.

The accompanying vasospasm in the occluded artery is chiefly of a myogenic nature and is initiated by the drop in distal arterial pressure. The contracted muscle in the vessel wall may actively resist distention even after full arterial flow and pressure

have been restored. Topical papaverine, warm saline packs and even distention of the occluded arterial segment with saline solution serve best to overcome the spastic state. Procaine block of the sympathetic nerves has no effect on myogenic spasm of the arteries, but is useful in combating neurogenic reflex vasospasm arising from distention and irritation of the artery at the site of the embolus which may affect the small arteries and arterioles. If the condition of the patient permits, one should employ low spinal or epidural anesthesia for the operation to assure blocking the autonomic pathways.

In performance of embolectomy the surgeon should strive for return of palpable distal pulses. If adequate retrograde bleeding is not obtained it can be assumed that there is a distal obstructing soft thrombus or less commonly an arteriosclerotic plaque or occlusion. Vigorous retrograde flushing with saline from a point more distal in the artery such as the popliteal or posterior tibial will prove most helpful in removing long thrombi. If a localized plaque is found, this area may be endarterectomized. If the occlusive disease extends over a wider range a bypass graft would be more acceptable. Surgical treatment for the late cases with more prolonged ischemia will be followed in some instances by a postischemic edema occurring in the muscles of the lower extremity. Unless the anterior and posterior fascial compartments are incised widely the blood supply may be further impaired from pressure with subsequent necrosis or mummification of the muscles.

As judged by mortality figures saddle embolus to the aortic bifurcation continues to present a formidable problem. Obstruction here renders both lower extremities and the pelvic region ischemic. Because of the widespread block of collateral channels the degree of ischemia is intense and thrombus propagation occurs rapidly. The cardiac disability is usually advanced and the additional vascular resistance produced by such a major arterial block imposes further strain on a badly diseased heart. For these reasons there is urgent need for immediate surgery. A further serious problem is encountered when the embolus is removed and a large vascular bed in the ischemic area reopened. Vasodilatation and sudden hypotension apparently has led to cardiac arrest in a number of cases. The iliac arteries should be opened sequentially and not simultaneously.

In the occasional instance in which a hemiplegia results from arrest of an embolus at the bifurcation of the common carotid artery prompt embolectomy may allow restoration of cerebral circulation with recovery of cerebral function. This is especially true since propagation of thrombus into the internal carotid system may produce further brain damage. The absence of facial and superficial temporal pulses should immediately arouse suspicion of an embolus at the carotid bifurcation.

We have already alluded to the importance of instituting heparin therapy soon after the diagnosis of embolus is made. It is advisable also to continue heparin therapy postoperatively to reduce the incidence of further embolization. Heparinization should be maintained until recovery from surgery is complete and cardiac compensation has been gained. Dicumarol therapy may be continued after discharge upon the recommendation of the internist. In addition, postoperative heparin therapy may be considered of value when embolectomy is performed on small arteries such as the popliteal and when the embolectomy has been incomplete. In the case of femoral and popliteal embolectomy a drain is placed through the subcutaneous tissue to be removed in twelve to twenty-four hours. Since drainage of the abdominal cavity is not considered advisable, further heparinization is delayed for four to six hours following iliac or aortic embolectomy.

The technique of embolectomy should be mastered by every general surgeon, since the best results will be obtained if the urgent surgery is performed with the least possible delay.

Lewis H. Bosher, Jr.

Society Proceedings....

Wise County Medical Society.

At a meeting of this Society on February 13th, the following officers were elected: President, Dr. G. V. Martin, Norton; vice-presidents, Dr. John Dellinger, Norton, and Dr. S. H. Rivers, Coeburn; and secretary-treasurer, Dr. Gordon E. Shull, Big Stone Gap, re-elected.

Warwick-Newport News Medical Society.

At the regular monthly meeting of this Society, held on January 8th, Mr. W. L. Robinson, Industrial Commission of Virginia, discussed the compensation problems in the State of Virginia and reviewed the compensation laws and how they should be interpreted by the medical profession.

At the meeting on February 12th, Dr. James Brooks, Department of Thoracic Surgery, Medical College of Virginia, spoke on "Emergencies in Thoracic Surgery".

Williamsburg-James City Medical Society.

At the meeting of this Society on February 13th, Dr. Peter N. Pastore, Medical College of Virginia, spoke on Recent Advances in Treatment.

On March 13th, Dr. Kinloch Nelson, Medical College of Virginia, was the guest speaker.

News....

Calendar of Coming Events

National Society for the Prevention of Blindness—Annual Conference—Hotel Statler, New York City, N. Y.—April 7-10.

American College of Physicians—38th Annual Session—Boston, Massachusetts—April 8-12.

The Virginia Dental Association—Annual Meeting—Cavalier Hotel, Virginia Beach, Virginia—April 29-30-May 1.

American Trudeau Society—52nd Annual Meeting—Kansas City, Missouri—May 6-9.

Virginia Academy of General Practice—7th Annual Scientific Assembly—Hotel Roanoke, Roanoke, Virginia—May 24-26.

American Goiter Association—Hotel Statler, New York City, New York—May 28-30.

American College of Chest Physicians—Annual Meeting—Hotel Commodore, New York City—May 29-June 2.

American Medical Association—Annual Meeting—Waldorf-Astoria Hotel—New York—June 3-7.

The Medical Society of Virginia—Annual Meeting—Hotel Shoreham, Washington, D. C.—October 27-30.

New Members.

Since the list published in the March issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

William Morgan Delaney, M.D., Alexandria
Jessie Marsh Enslin, M.D., Danville
John Simon Fitzsimons, M.D., Alexandria
William Calvin Grigsby, Jr., M.D., Bristol
Glenn Claire Hall, Jr., M.D., Radford
Emory Roy Irvin, M.D., Blacksburg
Morris Arthur Lambdin, M.D., Charlottesville
John Hoover Moon, M.D., Richmond
Herbert Ralph Silverman, M.D., Danville
Antonio Pietro Tirone, M.D., Richmond
James Roy Troxel, M.D., Winchester
Arthur Eugene White, M.D., Arlington

Tri-State Medical Association.

Dr. William R. Jordan, Richmond, was named president-elect of the Tri-State Medical Association at its meeting in Clemson, S. C., the latter part of February. Dr. John K. Webb, Greenville, S. C., became this year's president, and Drs. Malcolm Harris, West Point, Joseph Crosland, Greenville, S. C., and Claude D. Squires, Charlotte, N. C., were named vice-presidents. Dr. W. Gayle Crutchfield, Charlottesville, was elected councillor for Virginia.

The 1958 meeting will be held in Richmond, February 24th and 25th. Dr. Paul D. Camp, Richmond, is chairman of arrangements for this meeting.

Dr. Bell "Outstanding Citizen".

Dr. Houston L. Bell has been named as Roanoke's "Outstanding Citizen of the Year". He was honored for his courageous performance when he entered a home where a man had killed his wife and was threatening to kill his sister-in-law and his three children. When called to the home by the man, he was warned not to tell the police or the rest of the family would be killed. Despite the warning, Dr. Bell called the police and then went to the home where he was admitted and persuaded the man to give up his gun. He then led him out to the police.

Virginia Hospital Council Appointments.

Dr. J. Motley Booker, Lottsburg, has been appointed by Governor Stanley to fill a vacancy on the Virginia Advisory Hospital Council created by the resignation of Dr. Frank B. Stafford, Charlottesville.

Members re-appointed for four-year terms include Dr. W. T. Sanger, Richmond, Dr. H. B. Mulholland, Charlottesville, and Dr. Walter B. Martin, Norfolk.

Dr. H. B. Mulholland,

University of Virginia, will be one of the lecturers for the annual session refresher course of the Texas Medical Association, April 29-May 1.

Dr. John O. Hurt

Has been named chairman of the Red Cross fund campaign in Vinton.

Stoneburner Lectures.

The Annual Stoneburner Lecture Series was held at the Medical College of Virginia, March 20-22. The lecturer was Dr. Selman A. Waksman, professor of Microbiology and Director, Institute of Microbiology, Rutgers University, New Brunswick, New Jersey. His lectures were on Antibiotics, Their Sociological and Economic Implications and The Role of Antibiotics in Natural Processes.

Symposiums on Therapy were held on the last two days and were participated in by Drs. Edward S. Ray, Wyatt E. Roye, Count D. Gibson, and B. W. Haynes, Jr., all of Richmond; Dr. Thomas B. Barnett, University of North Carolina School of Medicine; Dr. Harold E. Harrison, Johns Hopkins University School of Medicine; Dr. Frank L. Meleney, University of Miami School of Medicine; Dr. Donald G. Johnson, Cornell University Medical College; Dr. John P. Utz, National Institute of Allergy and Infectious Diseases; and Dr. McLemore Birdsong, University of Virginia, School of Medicine.

Dr. James B. Funkhouser,

Richmond, has been appointed assistant to Virginia's Commissioner of Mental Hygiene and Hospitals, Dr. Hiram W. Davis. He has recently been chief of the neuropsychiatry service at McGuire Veterans Administration Hospital and is associate professor of psychiatry at the Medical College of Virginia. As assistant to the Commissioner, Dr. Funkhouser will also be director of training, research and mental hygiene clinics.

Dr. Charles L. Savage,

Waynesboro, has been named chairman of the Valley Mental Health Center's Advisory Board.

Respiratory Tract Infections.

The University of Virginia, School of Medicine, will have a Conference on Respiratory Tract Infections on April 12th. The guest speaker will be Dr. William B. Tucker, Director of Tuberculosis Service of the Veterans Administration, Washington, D. C.

Further information may be obtained from Mrs. David G. Simpson, Secretary, Postgraduate Conferences, Box 204, University Hospital, Charlottesville.

Dr. Malcolm H. Harris,

West Point, has been appointed by Governor Stanley to membership on a special legislative commission studying problems of aged persons. He replaces Dr. James P. King, Radford, who resigned.

Dr. Richard H. Kirkland,

Assistant Professor of Medicine at the Medical College of Virginia, spoke to the staff of the Northampton-Accomack Memorial Hospital, Nassawadox, on February 6th. His subject was Electrolytes.

South Atlantic Association of Obstetricians and Gynecologists.

At a meeting of this Association held in Charleston, S. C., February 6-9, the following officers were

elected: President, Dr. Manly E. Hutchinson, Columbia, S. C.; vice-president, Dr. C. Hampton Mauzy, Winston-Salem, N. C., president-elect, Dr. Charles J. Collins, Orlando, Fla.; secretary-treasurer, Dr. W. Norman Thornton, Jr., Charlottesville; and assistant secretary-treasurer, Dr. Lawrence L. Hester, Jr., Charleston, S. C.

The next meeting is to be held at the Hollywood Beach Hotel, Hollywood, Fla., February 1-5, 1958.

Dr. Robert M. Miskimon

Was recently elected commander of the Richmond Power Squadron. Representatives of the squadron will meet with officials of other squadrons in the Chesapeake Bay area to discuss ways of improving their contribution to boating. They have also made plans to sponsor another free course in boating and water safety in the fall.

American College of Chest Physicians.

The 23rd Annual Meeting of the College will be held at the Hotel Commodore, New York City, May 29-June 2. The scientific program will include prominent speakers on all aspects of heart and lung diseases. In addition to formal presentations, there will be a number of symposia, round table luncheon discussions, seminars and motion pictures. More than 50 experts will be present to lead the discussions on many subjects of current interest.

Copies of the program may be obtained by writing to the Executive Offices, American College of Chest Physicians, 113 East Chestnut Street, Chicago.

Practice Wanted.

Young, certified internist seeks hospital, clinic, or consultation type of practice. Not interested in family type of internal medicine practice. Write #80, care Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Wanted.

Obstetrician and Gynecologist to practice in an eleven man group. Two-man obstetric service. Board certification not absolutely necessary. Reply to #90, care the Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Obituaries . . . .

Dr. Thomas Mathews Vorbrinck,

Prominent Norfolk physician, died February 13th at the age of sixty-four. Two days before he had kept his usual schedule and was taken ill in a drug store and rushed to the hospital. Dr. Vorbrinck was a native of Richmond and a graduate of the Medical College of Virginia in 1917. He had been in general practice in Norfolk for thirty-eight years. Dr. Vorbrinck had been a member of The Medical Society of Virginia since 1920.

His wife, a daughter and a step-daughter survive him.

Dr. Estes Caskie Kidd,

Well-known Lovingston physician, died February 18th after an illness of several months. He was fifty-seven years of age and a graduate in medicine from the University of Virginia in 1922. After completing his internship, Dr. Kidd returned to Lovingston and had practiced in Nelson County since that time. He had been a member of The Medical Society of Virginia for thirty-three years.

Dr. Kidd is survived by his wife and two daughters.

Dr. Algernon Keeling Turner,

Roanoke, died January 23rd after an illness of two weeks. He was fifty years of age and a graduate of the University of Virginia Medical School in 1933. Dr. Turner practiced for a couple of years in Martinsville. After taking post graduate work, he came to Roanoke in 1940 and established the Turner Clinic at Poages Mill. Dr. Turner was a member of Omicron Delta Kappa, Theta Chi Delta, Sigma Pi Sigma, and Lambda Chi Alpha fraternities. He had been a member of The Medical Society of Virginia for fifteen years.

Dr. Turner is survived by his wife and his parents.

Dr. William Dunn Walker,

Charlottesville, died November 10, 1956, at the age of thirty-six. He was a graduate of the University of Virginia, Department of Medicine, in 1944 and served in the South Pacific during World War II. Dr. Walker had been in poor health since this time and had only recently been able to resume any practice. He was on the staff of the University Hospital. Dr. Walker had been a member of The Medical Society of Virginia for seven years.

Dr. Fisher

On January fifteenth, nineteen hundred fifty-seven, Dr. Guy Rothwell Fisher, aged sixty-seven, departed this life, leaving behind a rich heritage to those with whom he had come in contact; wide was the sphere of influence and acquaintance in the field of medicine, Masonry, politics, religion and human relations; for he was not un-

known to any organization in the many walks of life; for each and all had profited from his wide experience, rhetoric, personality and influence and the common welfare of man.

Now, that only memory of this beloved personality remains in the minds of his many friends, they, indeed, will cherish the good fortune of having known Guy Rothwell Fisher, who ever strove to emulate the Great Physician.

Be It Resolved, that this Memoriam be spread upon the minutes of the Augusta County Medical Society and that copies be sent to the Virginia Medical Monthly and to members of the family.

Boyd H. Payne
Charles F. Gaylord
Charles L. Savage
Augusta County Medical Society

Dr. Bell

Richard Phillips Bell, humanitarian and distinguished surgeon, lived to the age in which he could review the long life in retrospect and rest from his many labors. No longer the midnight calls and the anxious moments of relatives and friends, waiting for the final report—"all is well".

Always progressive and a moving force in the advancement of medical knowledge, he worked long and hard to increase the services for the sick and injured and advance the practice of medicine and surgery. His influence will long be felt in this and other communities for he did not labor in vain.

On the night of January twenty-third, nineteen hundred and fifty-seven, he lay down from his duties and wrapped the drapes about him to be at peace with the world and enter into the dream of his life and the reward that comes to those who deserve a Hallowed place as a benefactor of all mankind.

Be It Resolved, that this Memoriam be spread upon the minutes of the Augusta County Medical Society and that copies be sent to the Augusta County Medical Society, the Virginia Medical Monthly and to the members of the family.

Boyd H. Payne
Charles F. Gayelord
Charles L. Savage
Augusta County Medical Society

Dr. Dick

Dr. Murray Dick, prominent otolaryngologist of the Peninsula of Virginia, died on November 30, 1956.

He was born January 13, 1904, in Newport News. After attending public school, he graduated from the Newport News High School in 1922. The next four years were spent working for the Newport News Shipbuilding and Dry Dock Company. Wake Forest College was then the place of his pre-medical education. In 1928 he entered the Medical College of Virginia, receiving the degree of Doctor of Medicine in 1932.

Two years were then spent as Resident-Physician in the then Elizabeth Buxton Hospital. Following this, there were two years of training in Otolaryngology at Bellevue Hospital in New York City. Further training in Ophthalmology was obtained at the Newark Eye and Ear Infirmary.

In 1938, he married Miss Cammie Etheridge. He then began the practice of his specialty in Newport News, where he continued until his death.

Dr. Dick was a member of the Warwick-Newport News Medical Society, the Peninsula Academy of Medicine, the Tidewater Ear, Nose and Throat Society, The Medical Society of Virginia, Virginia Society of Ophthalmology and Otolaryngology, Southern Medical Association, and the American Medical Association. All the years he was in practice he was on the Staffs of the Riverside and Mary Immaculate Hospitals. He was consultant in Otolaryngology at the Langley Field Air Force Base Hospital.

Dr. Dick had especial patience and deep affection for all children. His kindness and extreme gentleness made them all love him. He was a most humble and modest person. Nevertheless, he had a strong character, in that all his decisions and actions were based on moral and spiritual justice without thought of personal gain.

He enjoyed summer visits to Nags Head, North Carolina, fishing and swimming in the company of his family. His wife, a daughter and two sons survive him.

His passing is a great loss to the profession and to the community. We his friends shall greatly miss him.

Therefore, Be It Resolved, that these resolutions be incorporated in the minutes of the Staffs of Riverside Hospital, and Mary Immaculate Hospital, and Warwick-Newport News Medical Society, and that copies be sent to the family of the deceased, The Medical Society of Virginia, The American Medical Association, Tidewater Ear, Nose and Throat Society, the Peninsula Academy of Medicine, Virginia Society of Ophthalmology and Otolaryngology, and the Southern Medical Association.

E. L. Alexander, M.D.
W. H. Kretz, M.D.
J. W. Phillips, M.D.

Dr. Jamison

Dr. Ewell Claude Jamison was born in Franklin County, Virginia, November 5, 1900. He attended Roanoke College and graduated from the Medical College of Virginia in 1927. He returned to his native county and began the practice of medicine, and did so until World War II. Upon his return from active duty with the Armed Forces he founded the Jamison Clinic to give this area its first general hospital facilities. This was subsequently closed to make way for the present Franklin Memorial Hospital.

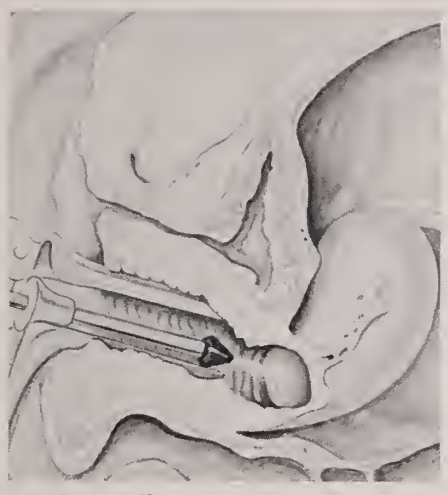
Although his primary interest was always in the practice of medicine, he found time to devote to his community's welfare by serving for many years on the Rocky Mount Council, active member of the Lions Club, trustee of the Franklin Memorial Hospital, director of the Bankers Trust Company, and a long-time deacon of the Rocky Mount Baptist Church.

Therefore, Be It Resolved, That in the death of Dr. Jamison this Staff has lost a highly respected and beloved member,

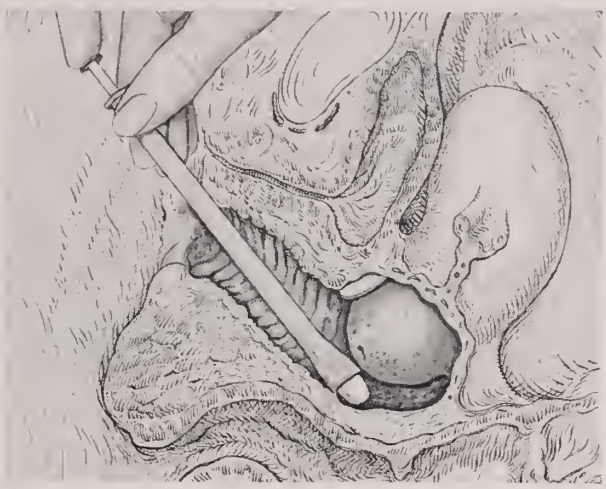
And, Be It Further Resolved, That a copy of these resolutions be included in the Minutes of the Medical Staff of the Franklin Memorial Hospital, and that a copy be sent to the bereaved family, and one to the Virginia Medical Monthly.

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*Williamson, P.: Trichomonad Infestation, M. Times *84*:929 (Sept.) 1956.

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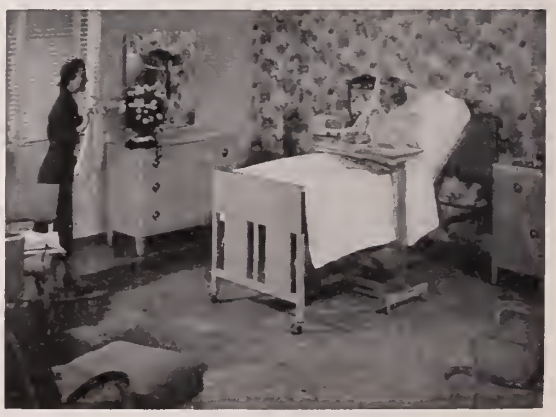
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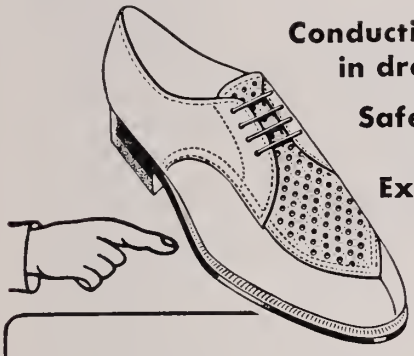
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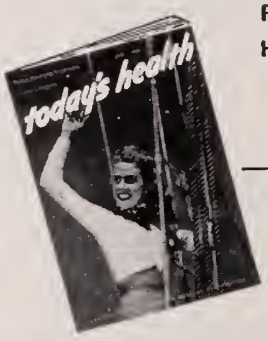
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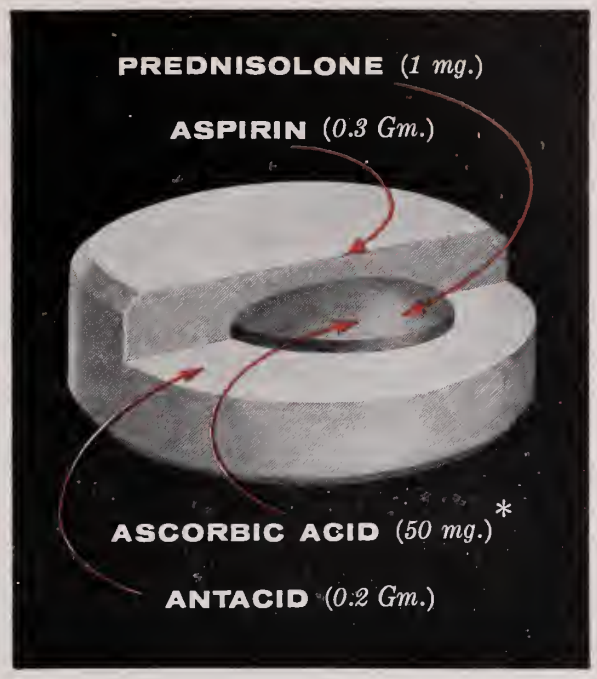
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With TEMPOGEN, many patients obtain adequate relief from immobilizing "rheumatic" pain with lower hormone dosages than are ordinarily required, because of the enhanced antirheumatic effect provided by the prednisolone-salicylate combination. In addition, the likelihood of the occurrence of gastric distress or adrenal ascorbic acid depletion is minimized.

INDICATIONS: Early rheumatoid arthritis, rheumatoid spondylitis, osteoarthritis, Still's disease, psoriatic arthritis, bursitis, synovitis, tenosynovitis, myositis, fibrositis, and neuritis.

Supplied: TEMPOGEN® and TEMPOGEN® Forte—in bottles of 100 Multiple Compressed Tablets. (TEMPOGEN Forte provides 2 mg. of prednisolone.) TEMPOGEN and TEMPOGEN Forte are trademarks of Merck & Co., Inc.

**present as 60 mg. sodium ascorbate*

MSD

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DIVISION OF MERCK & CO., INC. PHILADELPHIA 1, PA.



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Rubraton is indicated for combatting many common anemias and for correcting mild B complex deficiency states. It may also prove useful for promoting growth and stimulating appetite in poorly nourished children. (Not intended for treatment of pernicious anemia.)

Dosage: 1 or 2 teaspoonfuls t.i.d.

Supply: Bottles of 8 ounces and 1 pint.

1 teaspoonful (5 cc.) supplies:

Elemental Iron (as ferric ammonium citrate and colloidal iron)	38 mg.
Vitamin B_{12} activity concentrate	4 mcg.
Thiamine mononitrate	1.0 mg.
Riboflavin	1.0 mg.
Niacinamide	5 mg.
Pantothenic acid (Panthenol)	1.5 mg.
Pyridoxine hydrochloride	0.5 mg.

Alcohol content: 12 per cent

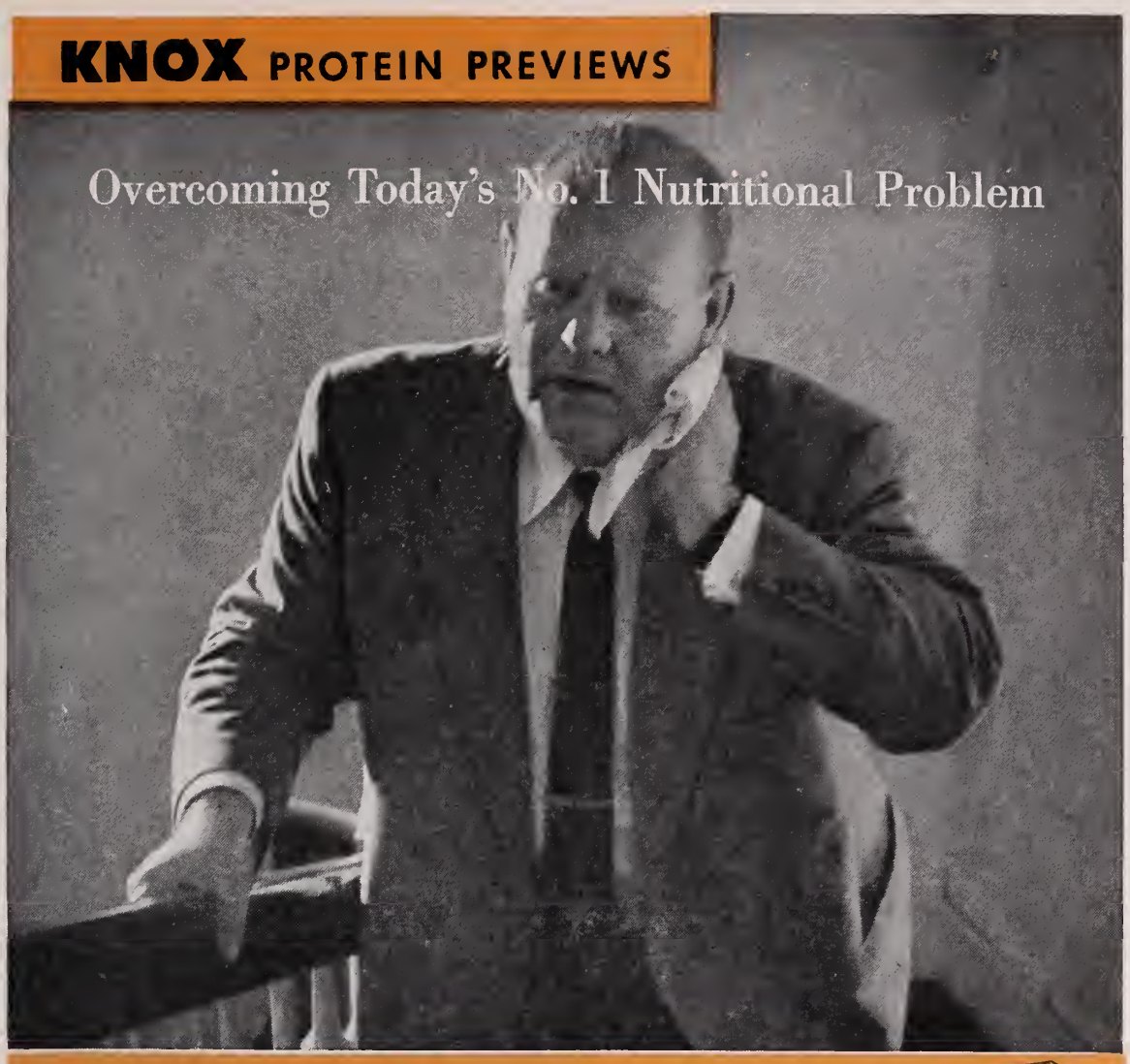
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1. Color-coded diets of 1200, 1600 and 1800 calories are based on nutritionally-sound Food Exchanges.[1]

2. Easy-to-use Food Exchanges (referred to in the Knox booklet as Choices) eliminate calorie counting by patient.

3. Diets promote accurate adjustment of caloric levels to the special needs of the patient yet allow each individual considerable latitude in the choice of foods.

4. More than six dozen appetizing, low-calorie recipes are presented on the last 14 pages of each diet booklet.

1. The Food Exchange Lists referred to are based on material in "Meal Planning with Exchange Lists" prepared by Committees of the American Diabetes Association, Inc., and The American Dietetic Association in cooperation with the Chronic Disease Program, Public Health Service, Department of Health, Education and Welfare.



Chas. B. Knox Gelatine Co., Inc.
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Your Name and Address

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Recent metabolic studies have established rational feeding procedures for prematures.

The initial feeding, 12 hours after birth, consists of one dram of 5 per cent dextrose. This solution is increased by one dram at 2-hour intervals if tolerated and retained.

After twenty-four hours, breast milk or formula (table below) gradually replaces the prelacteal feeding at 2-hour intervals. The volume of a feeding may be increased up to 2 drams daily until maintenance caloric requirements are fulfilled by the fifth day. If the infant shows signs of intolerance, the formula increase is made more slowly and the fluid requirement fulfilled parenterally.

Successful feeding mixtures consist of dilutions of powdered half-skimmed or evaporated whole cow's milk, skimmed or whole lactic acid milk. These formulas contain high protein, moderate carbohydrate and low fat, yielding about 120 calories and 150 cc. fluid per kgm. body weight.

The problems of prematures are always the same but the solutions differ with each era. Today the moderate carbohydrate requirement for normal infants as well as prematures is fulfilled by KARO® Syrup as adequately as a generation ago. Whatever the type of milk adapted to the infant, KARO may be added confidently because it is a balanced mixture of lower sugars resistant to fermentation, non-laxative, easily assimilated and well tolerated by all infants.

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℞ FIRST FORMULAS FOR PREMATURES

Fresh or whole lactic acid milk	6 oz.
Water	12 oz.
KARO	1 oz.
Evaporated milk	3 oz.
Water	15 oz.
KARO	1 oz.
Dried milk (half-skimmed)	4 tbsp.
Water	18 oz.
KARO	1 oz.

Feedings: 1½ oz. x 12 x 2 hours

Measures: 1 oz. KARO = 2 tablespoons

Caloric values: KARO, 120 per oz.; Cow's milk, 20 per oz.; Evaporated milk, 45 per oz.; Dried milk (½ skimmed), 35 per oz. (Vol.).

Equivalents: Red Label KARO or Blue Label KARO may be used interchangeably in all formulas.

Adapted from Nelson's Pediatrics, Saunders, Phila. 1954



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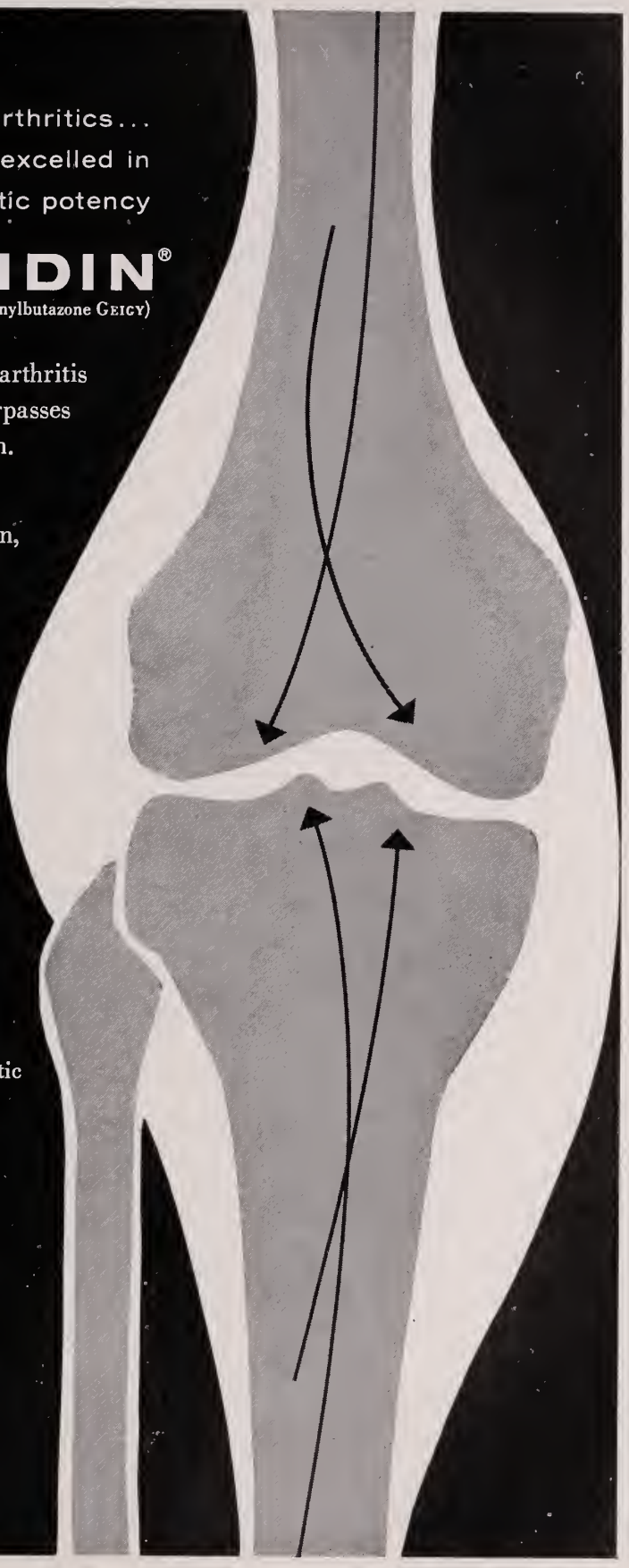
In the nonhormonal treatment of arthritis and allied disorders no agent surpasses BUTAZOLIDIN in potency of action.

Its well-established advantages include remarkably prompt action, broad scope of usefulness, and no tendency to development of drug tolerance. Being nonhormonal, BUTAZOLIDIN causes no upset of normal endocrine balance.

BUTAZOLIDIN relieves pain, improves function, resolves inflammation in:
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Component and Other Medical Societies in Virginia

(Officers and Others are Requested to Notify the **Monthly** of Changes)

SOCIETY	PRESIDENT	SECRETARY	TIME OF MEETING
Accomack County	J. Fred Edmonds, Accomac	J. C. Doughty, Onancock	Quarterly
Albemarle County	———	George Spence, Charlottesville	Monthly
Alexandria	H. Haskins Ferrell, Jr., Alexandria	Jean Lockhart, Alexandria	Monthly
Alleghany-Bath Counties	Donald S. Myers, Hot Springs	R. P. Hawkins, Clifton Forge	Bi-Monthly
Amherst-Nelson Counties	Lyddane Miller, Amherst	———	
Arlington County	K. Charles Latven, Arlington	W. Leonard Weyl, Arlington	Monthly
Augusta County	I. M. Nuckols, Staunton	John G. Crawford, Staunton	Quarterly
Bedford County	W. V. Rucker, Bedford	Dennis Robinson, Bedford	Quarterly
Botetourt County	M. S. Stinnett, Buchanan	E. L. Coffey, Buchanan	
Buchanan-Dickenson Counties	Bradley Berry, Grundy	J. S. Richardson, Grundy	Monthly
Charlotte County	Stuart Wilson Tuggle, Keysville	Thomas Watkins, Drakes Branch	
Culpeper County	O. K. Burnette, Culpeper	Cecil G. Finney, Culpeper	
Danville-Pittsylvania Academy	F. H. McGovern, Danville	Leon W. Powell, Jr., Danville	Monthly
Fairfax County	Gerald J. Inguagiato, Falls Church	Frances Ayres, Falls Church	Quarterly
Fauquier County	Evan H. Ashby, Jr., Remington	James L. Dellinger, Warrenton	Monthly
Floyd County	J. C. Rutrough, Willis	F. C. Bedsaul, Floyd	
Fourth District	James Thweatt, Petersburg	Clyde W. Vick, Jr., Petersburg	Five times a year
Fredericksburg	James G. Willis, Fredericksburg	Charles P. Barnett, Fredericksburg	Monthly
Halifax County	Nathaniel H. Wooding, Halifax	George E. Chappell, Halifax	
Hampton	B. E. Hunt, Hampton	R. H. Wright, Jr., Phoebus	Semi-Monthly
Hanover County	J. D. Hamner, Jr., Ashland	Claude K. Kelly, Mechanicsville	
Hopewell	D. P. Moore, Hopewell	W. P. Youngblood, Hopewell	Monthly
James River	Russell Snead, Columbia	J. H. Yeatman, Fork Union	Quarterly
Lee County	Thomas S. Ely, Jonesville	H. A. Kinser, Pennington Gap	
Loudoun County	John D. Wynkoop, Leesburg	Robert A. Orr, Leesburg	Monthly
Louisa County	Griffith Daniel, Louisa	A. R. Southall, Louisa	
Lynchburg Academy	J. W. Houck, Lynchburg	R. F. Hawkins, Lynchburg	Monthly
Medical Society of Virginia	James D. Hagood, Clover	Robert I. Howard, Richmond	Oct. 27-30, Washington, D. C.
Mid-Tidewater	Carl Broaddus, Newton	Malcolm H. Harris, West Point	Quarterly
Norfolk County	Mallory S. Andrews, Norfolk	John S. Thiemeyer, Jr., Norfolk	Semi-Monthly
Northampton County	H. L. Denoon, Jr., Nassawadox	J. R. Freeman, Cape Charles	Quarterly
Northern Neck	Spotswood D. Studdard, White Stone	J. M. Dailey, Reedsville	Semi-Monthly
Northern Virginia	M. J. W. White, Luray	Dennis McCarty, Front Royal	Three times a year
Orange County	David H. Miller, Orange	J. G. Bruce, Jr., Gordonsville	
Patrick-Henry Counties	T. H. Dickerson, Martinsville	G. W. Curwen, Fieldale	Quarterly
Princess Anne County	James W. Todd, Virginia Beach	John Crawford, Virginia Beach	
Richmond Academy of Medicine	Elam C. Toone, Jr., Richmond	Patty Boatwright, Richmond	Semi-Monthly
Roanoke Academy of Medicine	Harry B. Stone, Jr., Roanoke	W. Conrad Stone, Roanoke	Monthly
Rockbridge County	Thomas D. Hedrick, Buena Vista	E. W. Bosworth, II, Lexington	Monthly
Rockingham County	N. M. Canter, Jr., Harrisonburg	J. S. Huffman, Dayton	Quarterly
Russell County	Robert F. Gillespie, Lebanon	W. A. Davis, Dante	
Scott County	W. L. Griggs, Jr., Gate City	———	
Smyth County	J. A. Thompson, Jr., Marion	C. O. Finne, Saltville	Monthly
Southwestern Virginia	J. T. Showalter, Christiansburg	Wm. S. Credle, Bristol, Tenn.	Semi-Annually
Tazewell County	J. W. Fullerton, Tazewell	D. A. Cunningham, Richlands	Quarterly
Tri-County	M. M. Bray, Suffolk	J. E. Rawls, Jr., Suffolk	Monthly
Tri-State Medical Assn.	Roy B. McKnight, Charlotte, N. C.	R. B. Davis, Greensboro, N. C.	Feb. 24-25, 1958
Va. Soc. Amer. Col. Phys.	James F. Waddill, Norfolk	Wm. H. Harris, Jr., Richmond	
Va. Acad. of Gen. Practice	Frank E. Tappan, Berryville	R. G. McAllister, Richmond	May 24-26, 1957
Va. Neuropsychiatric Assn.	George S. Fultz, Jr., Richmond	Weir M. Tucker, Richmond	Spring & Fall Oct. 27, 1957
Va. Obst. & Gynec. Soc.	Millard B. Savage, Norfolk	Brock D. Jones, Jr., Norfolk	Apr. 7-9, 1957 Washington, D. C.
Va. Orthopedic Soc.	B. B. Clary, Richmond	Wm. M. Deyerle, Richmond	Apr. 12-13, 1957 Hot Springs
Va. Soc. of Pathology	Daniel Leavitt, Roanoke	George J. Carroll, Suffolk	May, Oct. & Nov.
Va. Pediatric Soc.	Thomas S. Chalkley, Richmond	Harry D. Cox, Portsmouth	Mar. 22-23, 1957
Va. Peninsula Academy	John F. Gayle, Hampton	Q. J. Legg, Newport News	Monthly (no meetings June, July & Aug.)
Va. Radiological Soc.	Carney C. Pearce, Jr., Petersburg	P. B. Parsons, Norfolk	Apr. 20, 1957 Washington, D. C. & October, 1957
Va. Soc. Anesthesiologists	Julius J. Snyder, Norfolk	Charles H. Meeks. Richmond	October, 1957
Va. Soc. O. L. & O.	L. Benj. Sheppard, Richmond	Maynard P. Smith, Richmond	
Va. Surgical Soc.	J. M. Emmett, Clifton Forge	R. L. Payne, Jr., Norfolk	May 11, 1957
Va. Urological Soc.	Wm. Russell Jones, Jr., Richmond	Frank Buck, Lynchburg	October, 1957
Warwick-Newport News	Frank S. Beazlie, Jr., Newport News	S. H. Mirmelstein, Newport News	Monthly
Williamsburg-James City	Ben T. Painter, Williamsburg	Janet H. C. Kimbrough, Williamsburg	Monthly, (except June, July & Aug.)
Wise County	George V. Martin, Norton	Gordon E. Shull, Big Stone Gap	Bi-Monthly
Wythe-Bland	Sam Huddle, Rural Retreat	C. B. Hughes, Wytheville	

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Medihaler Oral Adapter is made of unbreakable plastic ...no moving parts...and 200 applications in each 10 cc. bottle.



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advantages: (1) greater flexibility of dosage (2) effective tranquilization permits lower corticoid dosage

1. Personal communications

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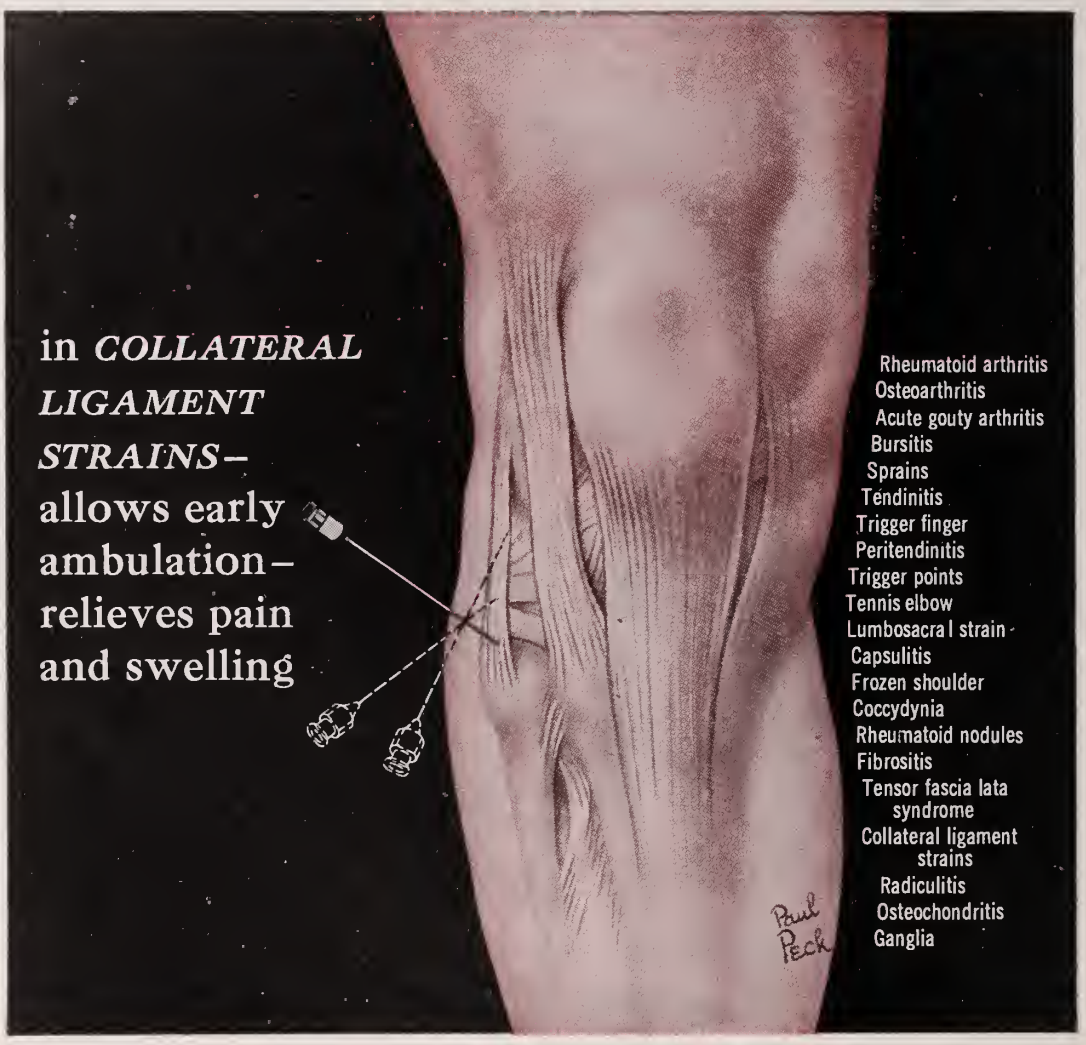
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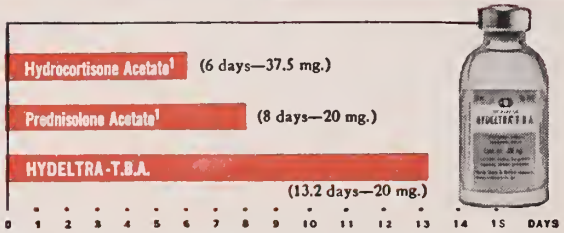
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Duration of relief exceeds that provided by any other steroid ester



Dosage: the usual intra-articular, intra-bursal or soft tissue dose ranges from 20 to 30 mg. depending on location and extent of pathology.

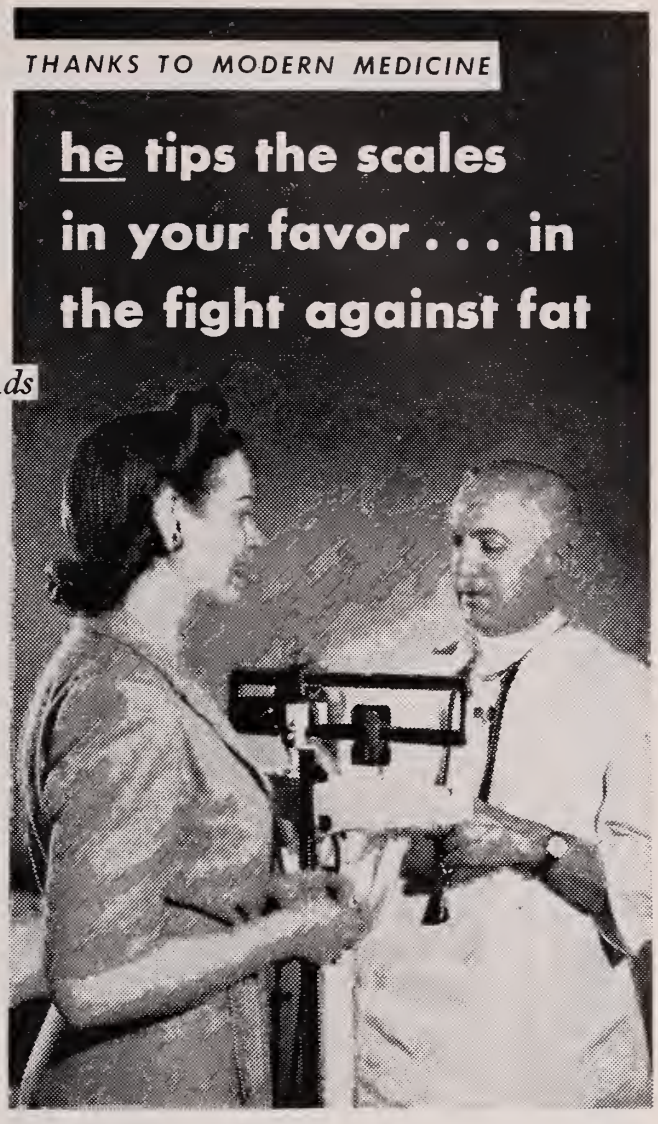
Supplied: Suspension 'HYDELTRA'-T.B.A.—20 mg./cc. of prednisolone *tertiary*-butylacetate, in 5-cc. vials.

MSD

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DIVISION OF MERCK & CO., INC.
PHILADELPHIA 1, PA.

1. Hollander, J. L., *Paper read at conference in New York City, May 31 and June 1, 1955*

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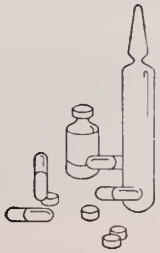
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Those fears might have been justified some time ago. Now, fortunately, when cases like Tom's are discovered early, doctors can often restore good health without the long stay in a hospital, and all the attendant worries about the problems of finances, family and future.

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As a maker of medicines prescribed by physicians, Parke-Davis is proud to be among those engaged in this great, world-wide fight against tuberculosis.

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TIME * LIFE * TODAY'S HEALTH * POST



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The ad points out that, thanks to earlier detection, improved surgery and the anti-tuberculosis drugs, tuberculosis has fallen from first to sixth place among the ten leading causes of death.

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In short, we're continuing to tell your patients that prompt and proper medical care may well turn out to be the biggest bargain ever to come their way.

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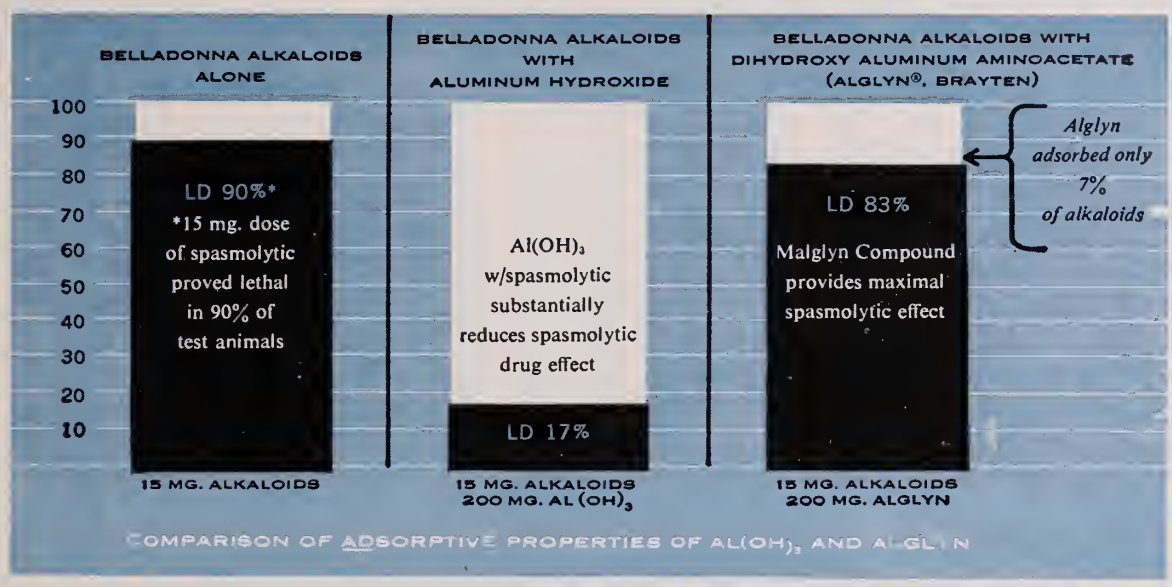
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(dihydroxy aluminum aminoacetate with belladonna alkaloids and phenobarbital)

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It's no wonder that of the many antacid-spasmolytic formulations promoted to the medical profession, so many physicians have found MALGLYN the most consistent in clinical effectiveness.

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dihydroxy aluminum aminoacetate, N.N.R.	0.5 GMs
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phenobarbital	16.2 MG.

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no pain . . .
no memory . . .

No Nightmare of Fear

How much more humane is today's pediatric surgical approach from the days when the child, filled with panic, was wheeled into the operating room. Pentothal Sodium, administered rectally, lets the child drop off into a dreamless sleep in his own room, awaken there afterward with no memory of the events between. Used as a basal anesthetic or as the sole agent in selected minor procedures, Pentothal Sodium by rectum is easy to prepare and can be used safely for a wide range of patients. Literature on request. Abbott

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1. Knoch, H.R., and Kirk, R.: Proclorperazine—A New Agent for the Treatment of Psychic Stress, in manuscript.

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As clinical reports on resistance of common pathogens to antimicrobial therapy gain increasing prominence,[1-5] need for broad-spectrum antibiotic therapy to which resistance is less likely to develop becomes even more apparent. Particularly troublesome are the staphylococci, which often fail to respond not only to commonly used antibiotic therapy but also to agents more recently introduced.[6-10]

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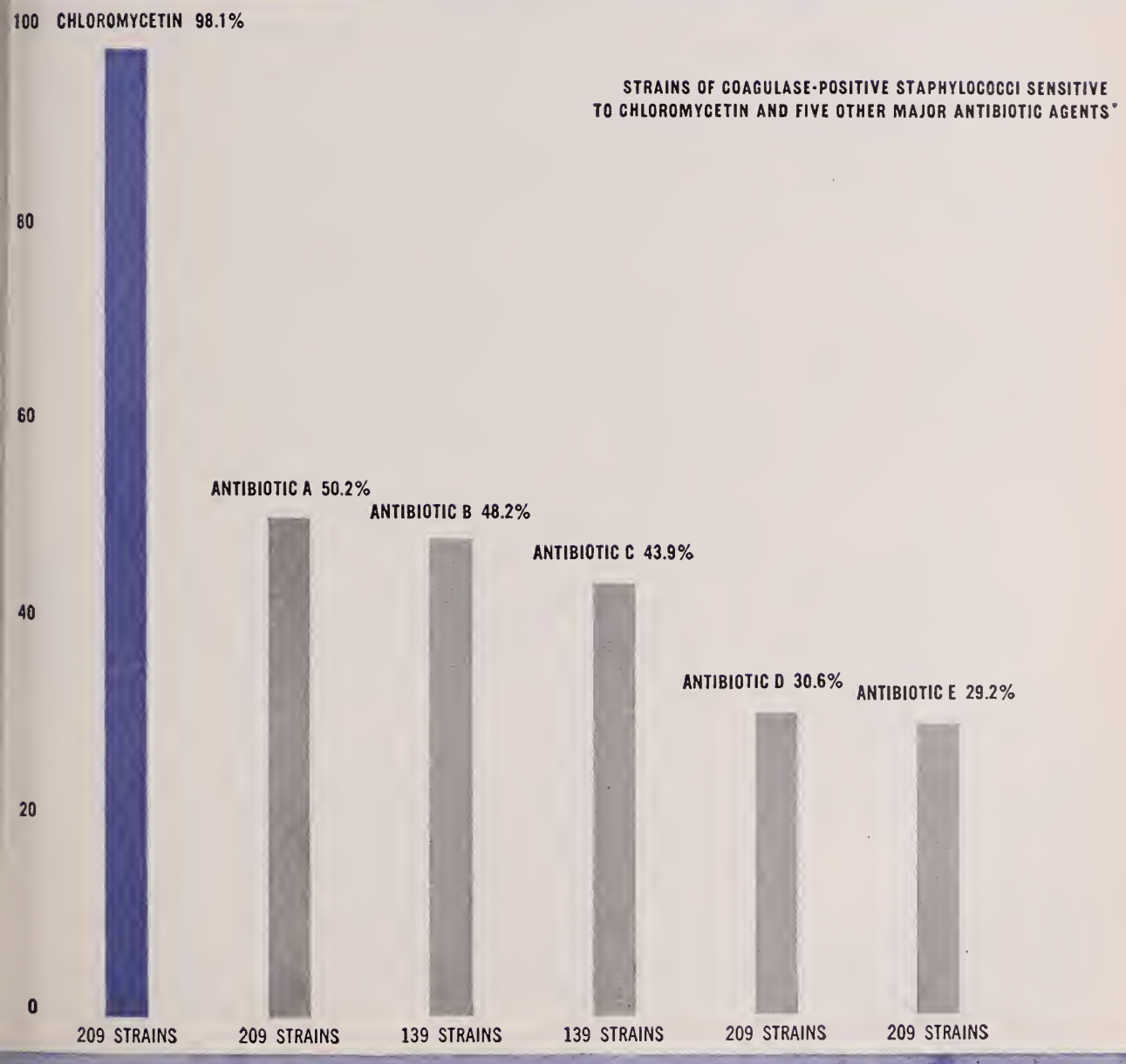
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his graph is adapted from Spink.[2]

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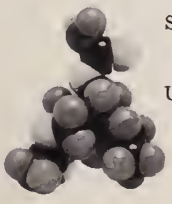
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Sokoloff, O. J.: A.M.A. Arch. Dermat. **74**: *393, 1956.*

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Thimann, J. and Gauthier, J.W.: Quart. J. Stud. Alcohol. **17**: *19, 1956.*

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Borrus, J.C.: J.A.M.A. **157**: *1596, 1955.*

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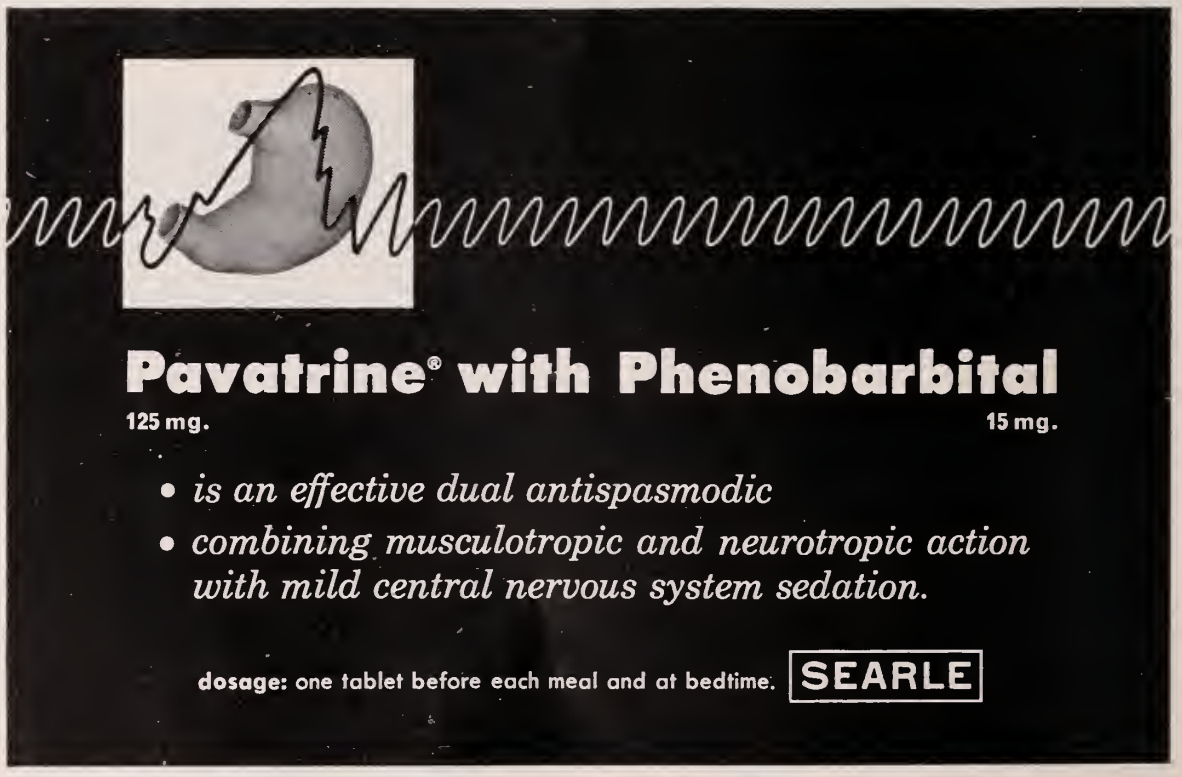
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1. Moyer, J.H.: J. Louisiana M. Soc. *108*:231 (July) 1956.

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2. Wright, W.T., Jr., et al.: J. Kansas M. Soc. 57:410 (July) 1956.

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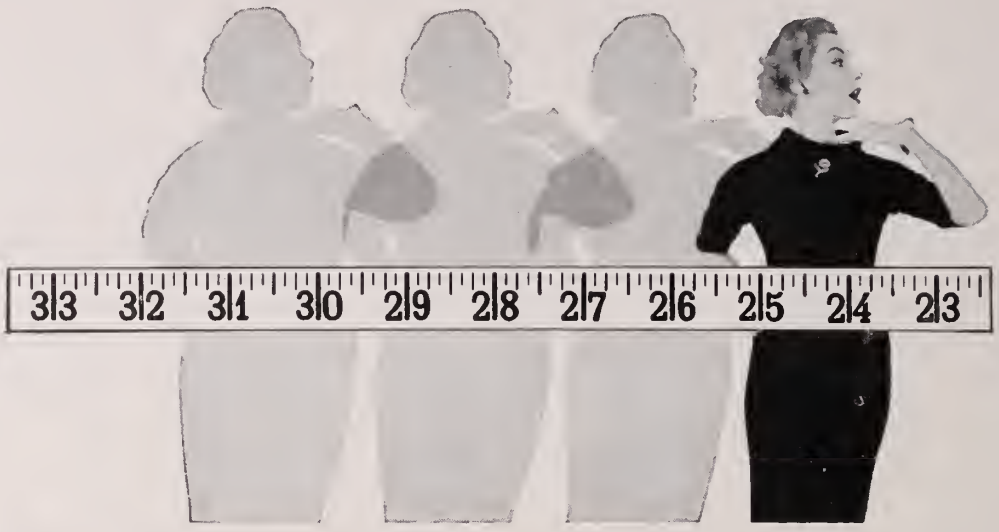
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(1) Holt, J. O. S., Jr.: Dallas Med. J. 42:497, 1956. (2) Gelvin, E. P.; McGavack, T. H., and Kenigsberg, S.: Am. J. Digest. Dis. 1:155, 1956. (3) Natenshan, A. L.: Am. Pract. & Digest Treat. 7:1456, 1956.

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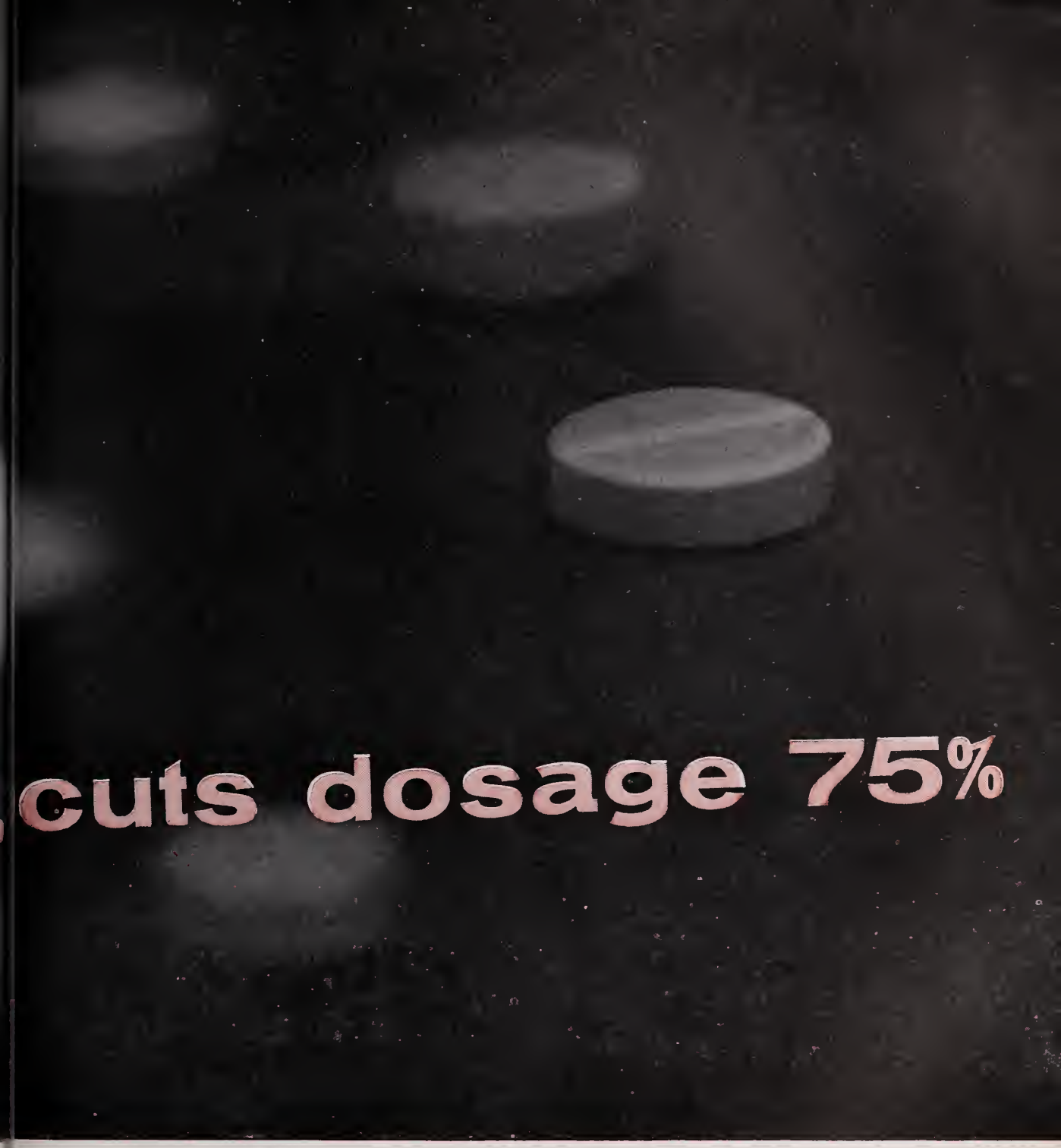


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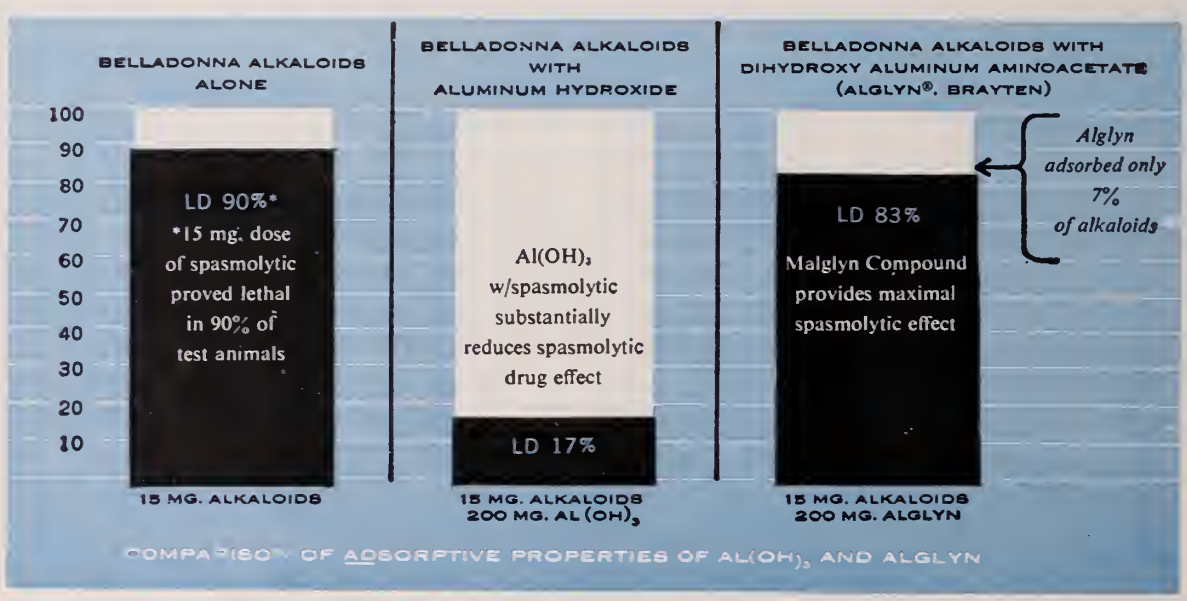
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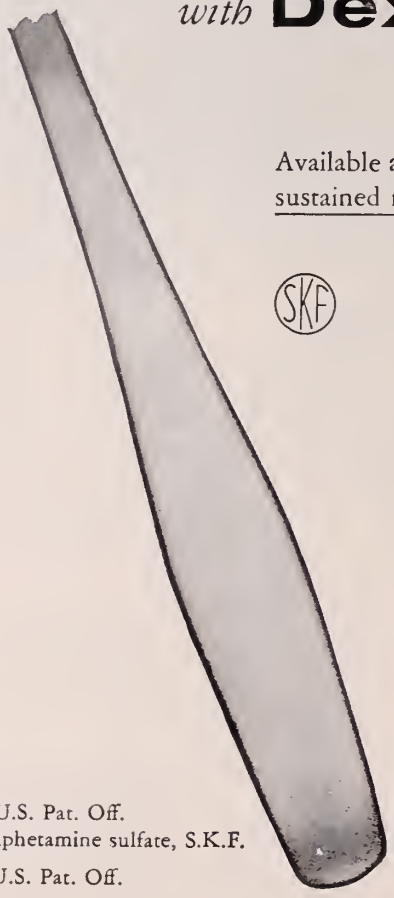


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• Most significant: Harmonyl causes less mental and phy depression. *And there are very few reports of the lethargy seen many other rauwolfia preparations.*

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Harmonyl as a tranquilizer

While Harmonyl's safety is most impressive, clinical inves tors reported other notable characteristics for this wide-r

Harmonyl*

(Deserpidine, Abbott)

uilizer. For instance, following an eight-month study of ic, hospitalized mental patients, Ferguson[1] reported:

rmonyl benefited at least 15% more overactive patients oral reserpine.

rmonyl was more potent in controlling aggression, ring only one-half to two-thirds the dosage of reserpine.

number of patients experiencing side reactions on pine were completely relieved when changed to Harmonyl.

s summary Ferguson concluded: "*The most notable im- ions were the absence of side effects and relatively rapid of action with Harmonyl.*"

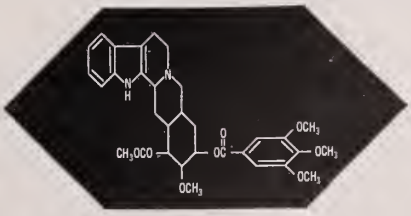
monyl in hypertension

rtension studies show that the average reduction in blood ure obtained with Harmonyl compares closely to that ob- d with reserpine. The tranquilizing effect of the two drugs appeared similar, except that few cases of giddiness, go, sense of detached existence or disturbed sleep were ved with patients receiving Harmonyl.

ges In mild anxiety, as little as 0.1 mg. of Harmonyl a nay be effective. In institutionalized psychiatric patients, ess than 2 to 3 mg. a day is likely to be beneficial.

ild essential hypertension, treatment may be started with .25-mg. tablet three or four times a day. After about ten (or sooner, depending upon response), dosage may be re- d. A maintenance dose of 0.25 mg. daily is often sufficient.

autions, As with other forms of rauwolfia, Harmonyl be used cautiously in peptic ulcer and epilepsy and in nts about to undergo surgery or electroshock treatment. ite infrequent reports involving depression, patients with tory of depressive episodes should be watched carefully.



essional literature is available upon request.

plied: Harmonyl is supplied in ng., 0.25-mg. and 1-mg. tablets.

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Reference: 1: Ferguson, J. T.: Comparison of Reserpine and Harmonyl in Psychiatric Patients: A Preliminary Report, Journal Lancet, 76:389, December, 1956.

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The Virginia
MEDICAL
MONTHLY

May, 1957
Vol. 84, No. 5
Whole No. 1259

Guest Editorial . . . .

The X-Ray Physician

IT IS NOW more than sixty years since Roentgen discovered the radiation which carries his name. Although this is almost a life-time, it is a very small period in the history of medicine, and the relative shortness of the time during which the radiation has been actively used makes the effect of the discovery on investigation and treatment more impressive. At the end of the last century the world was a great deal less tolerant than at the present time and Roentgen's work was greeted with distrust, distaste and derision by a few. This faction of the general public received it, not as a great advance which would go far to revolutionize medical practice, but as a slightly indecent method of prying into the private and hidden recesses of the human body. It was the physical aspect which caught the attention of both medical and lay public and, as a result, the science employing the Roentgen ray became known as Radiology or Roentgenology, and those who practiced it became Radiologists or Roentgenologists. In no other branch of medicine have physical properties, or an instrument, given the names to the method of investigation or the man using it. The chest physician is not called a stethoscopist and the physician in the physical medicine department is still called a physician. It is not in the best interests of Roentgenology that this title should have arisen, for the emphasis is now on the "radiation" and not on the man who uses it as an accessory method of making a diagnosis.

The childhood of radiology was protracted, chiefly on account of the slow progress in electrotechnics, but with the advent of commercial "broadcasting" and later television it developed more rapidly to reach its present position.

Three branches of medicine have been instrumental in making possible the very complicated and enterprising surgery of the present day: antibiotics and modern anesthetics from the operative side, and radiology in the diagnosis of the condition and in the accurate localization and estimation of the size of the lesion. Antibiotics and anesthetics are a combination of medicine and chemistry, while the radiologist looks more to the physicist to unravel his problems.

When the work in an x-ray department is considered, it is at once evident that the training of a radiologist must cover a wide field, but must course along certain lines.

The science is now of such importance to all branches of medicine that it is well to review the requirements of the present-day radiologist, and it is only when these requirements are generally appreciated that the team of practitioner and radiologist will work in true harmony and to the greatest advantage.

The knowledge of physics is not now of such great importance as formerly. The reason is not that physics enters less into the picture, but that it is so complicated and has become so advanced that it is now a special study. The radiologist must know the "language" the physicist will employ in solving his difficulties, but only in very rare cases need he be a master of the subject. Physics is safer and better served at the hands of a physicist. The question of apparatus construction and photography can be bracketed with physics; it is for the radiologist to say what he requires, and for the man with special training to answer the demand. The radiologist must be a first class doctor: the better his medical knowledge, the better radiologist he becomes. Experience has taught that he who has a higher medical qualification makes the best radiologist. This is to be expected for, as stated above, he is a doctor using x-rays as an accessory means to reach his conclusions. Although diagnosis is his chief concern, he must also study medical and surgical treatment for he must know what course this may take, what operation may have been performed, or what may be the ultimate fate of the patient. This knowledge covers such a wide field and one which, together with the rest of medicine, is expanding so rapidly, that it is evident the time will come when one feels the study must outgrow the man. This impression is not new, for in his Annual Discourse to the Massachusetts Medical Society, Merrill Sosman quotes from a committee report of the Medical Faculty published over one hundred years ago: "In modern times the constituent branches of medical science are so expanded that they are not acquired by any physician in a life time, and still less by a student in his pupilage". So we need not despair.

The radiologist may cut down his field and drift into specialization within his specialty as he becomes more senior, but whichever way he turns it is always his basic knowledge of medicine, surgery and pathology on which his usefulness to his clinical colleagues and the reliability of his opinion depend. Realizing this in Britain, a higher examination in radiology has been introduced and is proving of great value. The candidate must satisfy the examiners that he has a high standard of knowledge in Medicine, Surgery and Pathology, as well as exceptional training in Radiology.

One aspect of radiology on which comment is rarely made is the art of reporting the result of the x-ray examination. This can be very difficult, for it is essential that the facts are given correctly; helpful suggestions can be made and the exact impression gathered by the radiologist must be conveyed to the reader. We can paraphrase a further sentence in Sosman's recorded Harvard Medical Faculty report and say "the length of an x-ray report is not a measure of its value. It should not outlast the curiosity of its reader." But however comprehensive and effective a report may be, in value to the patient, it can never rival a short discussion between the clinician and radiologist, with the patient's films ranged before them on the viewing box and with the clinical history and details of physical examination. It is in this way that a few further, and perhaps the key, pieces of the jig saw of medical investigation are fitted in.

M. H. Jupe, F.R.C.S., F.F.R.

Editor's Note: Dr. Jupe is Director of the Radiodiagnostic Department of The London Hospital, London, England.

Positive Serologic Tests for Syphilis

True or False Positive Reactions

E. RANDOLPH TRICE, M.D.
RICHARD W. FOWLKES, M.D.
Richmond, Virginia

THE EVALUATION of positive serologic reports in determining the presence or absence of syphilitic infection is an old and familiar problem. Most physicians have encountered patients with positive serologic tests for syphilis (STS) in whom no clinical or historic evidence of syphilitic infection could be found. These individuals are suspected of being biologic false positive (BFP) reactors. The decreased incidence of syphilitic infections in recent years coupled with the continued widespread use of routine serologic testing as part of pre-employment, pre-marital pre-natal and preoperative physical examinations has led to a relative increase in the number of BFP reactors encountered in daily practice. Moore[1] has estimated that approximately 40 per cent of white patients in the upper socio-economic and educational levels with positive STS in the absence of clinical signs of syphilis are BFP reactors, and this percentage is likely to be increased as the incidence of syphilis is further reduced. These findings have acted as a stimulus to further investigation of the cause and significance of BFP reactions. Evidence has already been accumulated indicating that an alarming number of individuals develop a BFP reaction as an early manifestation of serious systemic disease, especially of the collagen vascular type.

NON-SPECIFICITY OF STANDARD SEROLOGIC TESTS

Just fifty years ago this year, Wassermann, Neisser and Bruck published their report announcing the development of a "serodiagnostic reaction for syphilis".[2] This report was soon recognized as a most significant contribution to the clinical management of patients with syphilis. Within a few years, however, numerous disquieting reports appeared, demonstrating that the reaction was not specific for syphilis but occurred occasionally in patients with non-treponemal diseases. Many attempts were made to improve the specificity of the Wassermann reaction. The various modifications of the original reaction were introduced as new tests bearing the names of their originators, such as those of Kolmer, Kahn, Eagle, Kline, Mazzini and many others. The most important development during this period was the introduction of a purified cardiolipin antigen by Pangborn, working in the Venereal Disease Research Laboratory (VDRL) of the U. S. Public Health Service.[3] The VDRL test, utilizing cardiolipin, was found to be readily reproducible in any laboratory and has, since World War II, found almost universal acceptance as the standard STS, replacing the various other tests used for this purpose. This easy reproducibility has practically eliminated the necessity of submitting sera to more than one laboratory or of requesting a battery of tests. Nevertheless the VDRL test is relatively sensitive and is not specific for treponemal diseases.

The search for a specific test for syphilis continued until 1949 when Nelson and Mayer, working in Turner's laboratory, developed the Treponema Pallidum Immobilization (TPI) test.[4] Though this is a cumbersome and expensive test to perform, it is, nevertheless, highly specific for treponemal infections. Recently newer and relatively more simple tests utilizing treponemal antigens have been developed which appear to be as specific as the TPI test.* Of these, the Treponema Pallidum Complement Fixation (TPCF) test of Portnoy and Magnuson[5] offers the most promise of actually replacing the cardiolipin test as a routine serodiagnostic test for syphilis in office and hospital practice at some future time. It is now clear that there are at least two antibodies that appear in the sera of individuals with syphilis: (1) the *non-specific* lipid antibody detected in standard tests and (2) the *specific* antibody detected in the TPI and related tests.

From the Department of Dermatology, Medical College of Virginia.

Presented before Annual Meeting of The Medical Society of Virginia, Roanoke, October 14-17, 1956.

* The Treponema Pallidum Immune Adherence (TPIA) test, the Treponema Pallidum Agglutination (TPA) test and the Treponema Pallidum Complement Fixation (TPCF) test.

FALSE POSITIVE REACTIONS

Unfortunately, the non-specific antibody demonstrable in standard tests, such as the VDRL test, is increased in many non-syphilitic diseases. Leprosy and malaria were recognized early as frequent causes of BFP reactions. Immunizations, the acute exanthemas, viral pneumonia and infectious mononucleosis are well-known causes of transient BFP reactions. In 1934 Stokes could list thirty diseases in which BFP reactions were presumed to occur.[6] In recent years, utilizing the TPI test for confirmation, the list has grown into the hundreds.

Moore and Mohr[7] found it convenient to divide BFP reactions into two types: the "acute" and the "chronic". The *acute* reactions occur during or shortly after a wide variety of acute infections or conditions and disappear spontaneously within a few days, weeks or months after recovery. *Chronic* reactions persist for months, years or even a lifetime and the disease processes and conditions with which they are associated are largely unknown. Since the introduction of the TPI test, however, it has been possible to investigate the problem more scientifically.

BFP REACTIONS IN COLLAGEN VASCULAR DISEASE

As early as 1940 Keil reported a high frequency of BFP reactions in systemic lupus erythematosis[8]. This view was subsequently reaffirmed by Montgomery and McCreight[9], Rein and Kostant[10] and Zellmann[11]. Haserick stated that a BFP reaction may be one of the first preclinical signs of systemic lupus erythematosis.

Two interesting studies have been reported in which groups of individuals with BFP reactions confirmed by TPI tests were subjected to extensive laboratory and clinical procedures and analyzed for possible causes of the reactions[12 13].

Moore and Lutz studied 148 chronic BFP reactors which had been observed for from one to twenty years.[12] With only rare exceptions these individuals had considered themselves to be in good health at the time they were taken into the study, having been referred to the authors in most cases because of the incidental finding of a positive STS. Subsequently, however, a diagnosis of systemic lupus erythematosis was established by clinical course and positive LE cell tests in 10 patients (6.7 per cent). An additional 45 patients (30.4 per cent) developed symptoms strongly suggestive of collagen vascular disease. In time, the authors surmise, more of these patients will develop full-blown collagen disease. Analysis of the blood chemistries in these patients, especially those tests affected by the gamma globulin fraction of blood, revealed abnormalities in 86 of 98 patients (87 per cent) studied. The significance of this finding will be discussed later.

Miller, Brodey and Hill recently reported their findings in a group of 555 patients with BFP reactions[13]. Unlike Moore and Lutz's group, a large number of these patients were already hospitalized for various reasons and 21.6 per cent of them already had systemic disease of one form or another. Twelve patients (two per cent) of this group had systemic lupus erythematosis, proved by clinical findings and LE cell tests. An additional 13 per cent had signs and symptoms of the lupus diathesis, such as rheumatic arthritis, unexplained febrile episodes and vague neurological signs. Other systemic diseases frequently encountered in this study were liver disease, diabetes mellitus, myocardial infarction and tuberculosis. Most of the patients were subjected to a battery of laboratory procedures, including complete blood counts, urinalysis, sedimentation rate, protein partition, cephalin flocculation, thymol turbidity, cold agglutination, heterophile, brucella agglutination and numerous other procedures. Approximately three-quarters of the patients with systemic disease had abnormalities of one or more of these tests. More significant was the fact that one-third of the individuals who considered themselves in good health showed abnormalities of one sort or another. As in Moore and Lutz's group, the abnormalities were found principally in those tests affected by gamma globulin.

ETIOLOGY OF BFP REACTIONS

The gamma globulin fraction of blood has been suspected, on theoretical grounds, for many years of playing a vital role in the production of BFP reactions. The findings of Moore and Lutz and of Miller and his associates of abnormalities of many other serologic tests affected by this globulin fraction tends to support this view. Moore and Lutz propose the term *dysgammaglobulinemia* for this phenomenon which they suggest may result from injury to collagen and vascular tissue. A similar pathogenesis has been suggested for the LE cell phenomenon. The surface has only been scratched as far as our knowledge of the etiology of BFP reactions is concerned. However, the accumulated evidence to date seems to indicate a casual relation-

ship between the production of the chronic BFP reaction and of serious systemic disease.

MANAGEMENT OF THE PATIENT WITH A POSITIVE STS

It would appear then, that finding a positive STS in a patient with no other signs of syphilis no longer merits a presumptive diagnosis of syphilis, and physicians are not justified in giving such an individual a course of antispyhilitic therapy "to be on the safe side". The patient with a positive STS deserves a detailed investigation and thorough physical examination not only for signs of syphilis but also for signs of other systemic diseases. The STS should be repeated at two to four week intervals for at least three months. It may be advisable to perform other laboratory tests such as smears for malaria, heterophile agglutinations, protein partitions and cephalin flocculation tests. If there is a definite rise in titre of the STS or other signs of syphilis develop, a cerebro-spinal fluid examination and other procedures to confirm a diagnosis of syphilis should be done. On the other hand, if the STS reverts to negative without antisyphilitic therapy and no signs or symptoms of systemic disease arise, then the matter can be safely dismissed. If the positive STS persists throughout the observation period without signs of syphilis the TPI test or a related treponemal test should be performed. The TPI test is sufficiently reliable that a final diagnosis of the presence or absence of syphilis can be based on the results of this test. The same can be said of the TPCF test which is likely to become available through the Health Department and perhaps also in private laboratories in the near future. Once the diagnosis of a chronic or persistent BFP reaction has been established periodic observation of the patient for evidence of systemic disease should be maintained so that prophylactic measures and early treatment can be instituted for the underlying disease process.

CONCLUSIONS

A re-orientation of the physician's attitude toward the chance finding of a positive STS in an otherwise healthy individual is necessary in the light of recent studies regarding BFP reactions. True, the patient may have latent syphilis, but a larger proportion of patients with positive STS in the absence of other signs or history suggestive of syphilis are found to have BFP reactions. Confirmation of the diagnosis has been facilitated by the development of the TPI and other specific treponemal tests. Whereas, formerly it was reassuring to find that a patient's positive blood test was not due to syphilis, now we realize that a false positive test may represent a more serious condition than syphilis and one which presents a more difficult diagnostic and therapeutic problem. The collagen vascular diseases now appear to be firmly established as frequent causes of the chronic BFP reaction. It therefore becomes incumbent upon physicians to investigate clinically and laboratory-wise all patients with chronic BFP reactions.

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Benign Gastric Leiomyoma

Case Reports and Review

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STIMULATION of personal interest in benign gastric tumors was afforded by the opportunity to observe two patients in St. Luke's Hospital, Richmond, during the summer of 1955 in each of whom a solitary ulcerated leiomyoma was found at operation.

CASE REPORTS

Case 1: E.S.R. This 69 year old housewife was hospitalized June 8, 1955, complaining of weakness and black stools of three days duration. She denied pain, vomiting, or previous melena, had no history of ulcer, was non-alcoholic, and, except for mild belching and gaseousness, had experienced no previous digestive distress. The past history was noncontributory.

Physical examination disclosed marked pallor of the skin and mucous membranes, a tachycardia with systolic murmur at the cardiac apex, normal blood pressure, negative abdomen, and tarry stool in the rectum. The red blood count was 2,350,000, hemoglobin 3.7 gm. and hematocrit 17 per cent. The stool was strongly positive for occult blood. The stomach contained a normal amount of free hydrochloric acid. X-ray study revealed a filling defect in the body of the stomach.

The patient was explored by Dr. W. P. Barnes after evidence of bleeding had ceased and multiple transfusions had restored the blood picture to normal. A round firm tumor measuring 3.5 by 2 by 1.4 cm. and containing an ulcer measuring 1.3 cm. in diameter and 0.5 cm. in depth was excised. The tumor was located on the greater curvature of the stomach at the juncture of its middle and upper third. (Fig. 1) The pathologic report was benign leiomyoma. The postoperative course was smooth and the patient left the hospital on the thirteenth day after her operation. Re-x-ray in December, 1955, and September, 1956, revealed a normal stomach. The patient has been well since she was discharged from the hospital.

Case 2: H.J.B. This patient was a 26 year old married stenographer who was hospitalized August 8, 1955, with a history of severe epigastric pain for two weeks. The pain was worse when the stomach was empty, especially during the night. There was associated nausea, burning, and also a feeling as if the stomach was "grinding and growling". For two months there had been regurgitation of dark brown liquid on several occasions but no fresh blood had been noted. During the past year she had



Fig. 1—Case 1. Cross section of leiomyoma showing ulceration of mucosa.

experienced nausea and frequent vomiting episodes after eating solid foods. Despite her symptoms she had gained 15 pounds in the preceding nine months. Past history revealed intolerance to greasy foods, a tendency to gasecusness, and on one occasion an episode of precordial pain which radiated into both arms.

Physical examination disclosed a well developed, well nourished woman who was in no distress. The mucous membranes were not pale. The heart and lungs were normal. There was slight tenderness in the right upper quadrant, but abdominal palpation was normal otherwise. The hemoglobin was 13.3 gm. Cholecystogram was normal. X-ray study of the stomach demonstrated a round filling defect measuring approximately 4½ cm. in the cardia. A

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fleck of retained barium was seen in the center of the translucent defect and was thought to represent an ulcer crater. The surrounding mucosal pattern was quite normal and no gastric retention was present after five hours.

The patient was explored by Dr. J. R. Massie, Jr., through a left thoracotomy incision. A tumor about the size of a "turkey egg" in the cardiac end of the stomach just anterior and lateral to the entrance of the esophagus was enucleated. The tumor was in the wall of the stomach and had a hole in the center resembling an ulcer crater. It measured 4¼ by 3 cm. and there was a 3 mm. hole in the mucosa leading down into a cavity which was roughly 1 by 1½ cm. in size. (Fig. 2) The pathologic diagnosis was benign leiomyoma with ulceration of the overlying mucosa.

Although the patient was febrile for the first seven postoperative days, her course thereafter was uneventful and she was discharged from the hospital on the eighteenth day following the procedure. Roentgen examinations in December, 1955, and September, 1956, have been reported negative for gastric pathology.

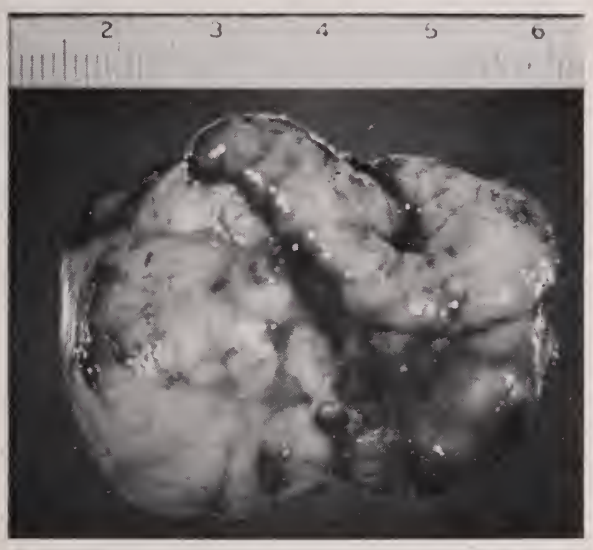


Fig. 2—Case 2. Gross specimen.

DISCUSSION

Investigation of the surgical pathology files of St. Luke's Hospital revealed no other instances of gastric leiomyoma during the 25 year period 1930 to 1955. A search of the clinical records at the Medical College of Virginia Hospital for the same period disclosed three patients in whom a diagnosis of gastric leiomyoma was established on the basis of pathologic examination of the excised tumor. In only one of the three had the lesion been responsible for symptoms. This patient was a 65 year old male who was admitted in April, 1940, because of weakness, hematemesis, and melena. A benign leiomyoma on the lesser curvature side of the gastric cardia was removed successfully. This case was reported in the Virginia Medical Monthly by Drs. Carrington Williams and Nathan Bloom[1]. According to them, it was the only gastric leiomyoma diagnosed clinically at the Medical College of Virginia Hospital in 15 years. Dr. Bloom reports that the patient is living and well at the present time. The two other cases, one male and the other female, ages 68 and 67 years respectively, were both hospitalized in 1952. A solitary gastric leiomyoma was discovered incidentally at operations undertaken for cecal carcinoma and small bowel obstruction respectively.

Pathologically the leiomyoma is a common gastric lesion. Meissner[2] found one or more leiomyomas in 23 (46%) of the 50 unselected stomachs carefully studied postmortem. Other investigators have reported an incidence varying from 36 to 60 per cent of all benign tumors encountered in different groups of autopsied cases[3]. These tumors may easily be missed on routine roentgen study and since they may produce no symptoms their diagnosis during life is somewhat of a rarity.

Most leiomyomas[4,5] are small although they may become quite large, sometimes filling the entire upper abdomen. They vary from less than 5 mm. to 20-30 cm. in diameter. A tumor weight of 6,500 gms. has been reported. Multiple tumors are rare. The lesion is well circumscribed but is rarely encapsulated. It has a firm rubbery consistency, is round, ovoid, usually sessile but may be pedunculated. Cross section reveals a grayish-pink surface having the appearance of whorls or "watered silk." Microscopic examination discloses interlacing bundles of spindle-shaped, smooth muscle cells arising in the muscular layer of the gastric wall. Multinucleated giant cells and mitotic figures are usually absent. Fibrosis, hyaline material and central calcium deposition are common findings. The leiomyoma may be exogastric or endogastric, the latter type projecting into the gastric lumen. The majority of the tumors which produce symptoms are endogastric and are covered by a thin layer of mucous membrane which is often ulcerated. The most common manifestation, therefore, is hemorrhage from this ulcerated surface. Bleeding may be sudden and massive or occult from slow but persistent oozing so that anemia gradually develops. Pain may be experienced which

may be atypical or mimic gastric ulceration. Obstruction has been reported when the lesion develops in the vicinity of the pylorus, but this complication is unusual. In very rare instances, the growth is sufficiently large to be palpated abdominally. Roentgen examination discloses a sharply circumscribed, smooth, intraluminal filling defect which may contain a central crater. Rugae are obliterated but the proximal wall is pliable and peristalsis is normal. Calcification may be visible within the translucent defect. Gastroscopic examination is valuable in the differential diagnosis of malignancy, but in all instances histologic study is required before one is reasonably certain that the tumor is benign.

Our primary purpose in reporting these cases is to direct your attention to the clinical features of the benign gastric neoplasm. As everyone knows, carcinoma is by far the most common gastric tumor. It accounted for 92 per cent of 1700 gastric tumors removed surgically in the Lahey Clinic during the past 25 years[6]. In this same series benign tumors comprised only 4.8 per cent. Autopsy statistics, however, suggest a much greater incidence. For example, there were 196 gastric neoplasms in a series of 6,742 autopsies performed over a four year period at the University of Minnesota. Fifty or 26 per cent of these tumors were benign[7]. This apparent discrepancy may be partially explained by the fact that many are very small, do not produce symptoms, and are clinically unimportant. Consequently, antemortem diagnosis is not often made.

A simple classification of benign gastric tumors based on tissue origin recognizes three main groups[8]. In one group are those arising from the mucosal epithelium which consist largely of adenomas or adenomatous polyps. In another group are those of mesenchymal origin which may be found in the submucosa, muscularis, or the serosa. The most frequently encountered lesion in this category is the smooth muscle leiomyoma, less often there is the neurofibroma, lipoma, and angioma. A third group includes certain miscellaneous lesions not considered to be true neoplasms such as heterotopic pancreas and enterogenous cysts. Among the 1700 tumors reported from the Lahey Clinic 82 were benign[6]. In this group there were 28 leiomyomas, 37 polyps, and 12 aberrant pancreatic rests. In most series these three tumor types appear to occur most often.

It is generally agreed that the treatment of all benign gastric tumors is surgical. The extent of the procedure depends on the location, size and malignant potential of the growth. In the majority of cases gastrotomy and local excision are sufficient. An important exception to this general statement is the presence of polyposis for which subtotal resection is recommended not only because of tumor size but also because malignancy cannot be excluded with certainty until the entire specimen has been scrutinized microscopically. Lahey[3] recommended wide subtotal gastric resection for leiomyoma because of the possibility of sarcomatous degeneration. This opinion is not shared by others[4] who are convinced that a more conservative procedure is indicated and advise excision of the growth with the removal of a small margin of normal tissue unless the lesion is extremely large or appears to have undergone malignant change.

SUMMARY

1. Two cases of symptomatic benign gastric leiomyoma have been reported.
2. A brief general discussion of the more common benign gastric tumors has been presented.

Acknowledgement: The author is indebted to Dr. J. R. Massie, Jr., for permission to report Case 2.

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The Pre-Payment Hospital Insurance Dilemma

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MORE AND MORE people are being brought into the fold of some type of pre-payment plan of hospital insurance. This is good. The more completely our population is covered by pre-payment insurance, the less likely we are to have Socialized Medicine. This increase in enrollment has resulted from the rising cost of medical care and the effective appeal by representatives of the various plans by way of radio, television, door to door visitation by salesmen and circularization of the community through the mail. In many instances, by means of high pressure salesmanship, the prospective candidate is not only urged and frequently induced to buy the plan, but to use it regardless of the nature of the illness. This fact helps to augment the usually present intention of the insured to use the plan, if and when illness intervenes, even though the illness is one that survival may be anticipated by home treatment. Then, all too often, for some reason or other, the hospital admission is denied, resulting in a disillusioned insured and, in many instances, with some plans, cancellation of the policy follows, either at the direction of the insurer or by the angry, cynical and disillusioned insured. If, as we believe and have contended, pre-payment hospital insurance is the answer to Socialized Medicine, reasonable usage must be allowed and some way must be found to have as complete a coverage as possible in the lower strata financial group. Any illness in this group is catastrophic—financially—and let us not forget that it is this segment of society our Government is contending is not receiving adequate medical care. A liberal usage of the plan would be expected in this group. The majority of the insured undoubtedly feel it is their privilege to use their insurance when illness intervenes, regardless of the nature of the illness. An insurance plan simply represents a commodity they have purchased and they consider it their business to do with this commodity as they wish. The thought never occurs to them that their request for hospitalization may be questioned and even not allowed. Unfortunately, there is often a discrepancy between promises and performances which is not good, nor is it right.

The Blue Cross-Blue Shield Plan occupies a very special niche in the minds and in the thinking of physicians and rightly so, for is not this Plan the product of our thinking? Did we not predict a great future for the Plan? Did we not say, "this is the answer to Socialized Medicine", "this pays your bill", "this Plan does not question your hospitalization, nor does it deny your claim", "this Plan does not give it to you in the big print and take it away from you in the small print", etc.? Yes, at the time of the birth of the Blue Cross-Blue Shield Plan, we said these and similar things many times in speeches and we encouraged our patients to buy this Plan. The Plan was practically all inclusive without many obvious faults, unless, as we now realize, that its general inclusiveness lends itself to a wide spread usage. Could this all inclusiveness be likened to a monster that will destroy itself? This inclusiveness is a special feature with the Blue Cross-Blue Shield Plan and, as pointed out, this feature is an attractive one and represents a real bargain to the sick. Speeches were made before groups extolling the virtues of the Plan and, in order to be fair, we spoke highly of other plans, particularly some of the old line plans that were in use before our Plan was born. We tried to predict and portray what would happen to the American Way of life—medically—if Socialized Medicine became a reality.

Now the claim of abuse and overuse is being leveled at the insured with the intimation that the physicians, by recommending or permitting hospitalization of patients with illnesses that may be treated at home, etc., are lending themselves to a practice that is threatening to "kill the goose that lays the golden eggs". We are asked to act in the capacity of a traffic cop, so to speak, directing traffic to or away from the hospital. We are to act in the capacity of judge and jury and it is, of course, obvious that this responsibility is ours. We must accept it and discharge this responsibility to the best of our ability. In my opinion, we must handle each case on its merits and look through the eyes and in the spirit of the Great Physician. When all the facts are considered and all the evidence is in, it is entirely possible a case that would appear from the diagnosis as one amenable to treatment at home, may demand hospital care. In arriving at our decision, we must let our conscience be our guide.

There will be no set pattern. Different factors will be present in each case. The lower income group will cause us the greatest concern. We must take time to discuss the problem with our patients, letting them see both sides of the question, explaining how excessive usage will be reflected in an increased premium and, yet, remembering that the treatment and place of choice should be the one that will not only more likely insure survival, but in which morbidity will be held to a minimum. We must ever keep in mind our rich heritage, and be sure we are carrying the torch that has been handed to us in a manner that will let its light shine brilliantly and unashamedly, remembering that we are making decisions that eat at the very vitals of our way of life.

It is proper, I believe, to expect each one to carry his share of the load and I also feel strongly that we must help when the burden is too great for a fellowman to carry alone. We surely will have to have wisdom from above to guide and direct us in arriving at the correct answers. As I err, I should like for the record to show that it is in what I thought was the best interest of the poor and the lower strata financial group. I do realize that, in the long run, considering what is good for the whole population, rather than a certain segment, should determine our decision, but somehow or other, I believe the Good Lord wants us to offer our best to everybody and particularly this group. I also believe that He expects us to help ourselves as much as possible by doing our best. In this connection some of the sayings of Abraham Lincoln may be applicable: "You cannot help anyone permanently by doing for them what they should and can do for themselves"; "you cannot develop courage and character by taking away a man's initiative and independence"; "you cannot make the poor richer by making the rich poorer", "you cannot pull the wage earner up by pulling the wage payer down"; "you cannot strengthen the weak by weakening the strong". It has been pointed out to us that "it is better to lose what appears to be a temporary gain in order to make more certain a future victory", and it is good medicine to prescribe, "stepping out into the wind and face the challenge of the storm", to help develop these traits that will lead to a happier and more abundant life. It is difficult to apply these sayings in the case of a sick person requesting hospitalization for an illness that may be treated elsewhere. Experience has shown that self respect, courage, character, etc., may be developed as a result of adversity, being advised to push a little harder, pull a little longer and carry a heavier load for a while, if we use these things as stepping stones to higher ground and a wider horizon. We know that it isn't good to make things too easy, yet, we must be sure not to be responsible for depriving someone of his just expectations and dues. Our interest must primarily be in our patients and yet, by the position we occupy, we are honored and privileged to act as counselor and guide. I wonder what the verdict of the jury would be, should the insured, who was denied requested use of his pre-payment plan by the physician, elect to bring suit against the physician? If hospitalization is required for the best treatment, will we be declared guilty if we do not permit it? It would appear we would not be guilty unless permanent sequellae would develop under home care that would not have developed under hospital care. While we do not want to "kill the goose that lays the golden eggs", neither do we want to repudiate the spirit that was present at the birth of the Blue Cross-Blue Shield Plan and has manifested its course since, nor do we want to plant seeds that will result in a harvest of Socialized Medicine in the future. We must not detour appreciably from the road we have been traveling to the extent that the proponents of Socialized Medicine can point a finger at us with the accusation, "you are not what you claimed to be". Let's be sure that our performances keep in step with our promises. The correct answer to our problems will undoubtedly be found as we let the light from the teachings of Jesus and the thinking of men like Abraham Lincoln shine upon them.

What should we do and what can we do? To solve this many sided problem justly will be difficult. Complete cooperation between the physician, the insured and the insurer will be required. Every effort must be made to see that good medicine is not only made available but attainable to all. It is true that many of the medically indigent are receiving treatment at the office, home or hospital, provided by the Welfare Departments, and we are glad to say with humility this is as it should be. Personal altruism must never perish from the earth. Before the advent of the Welfare Departments, each locality looked after its own, and we found those who have sharing with those who have not. This spirit should continue, even though now most of our material possessions go into our national treasury in the form of taxes and are directed back to our localities. Group giving, while necessary, must not be allowed to replace personal giving to those who need. The Bible tells us that the poor will be

with us always. Does not this saying represent a constant challenge to us? There is, of course, a large low income group not eligible for help from the Welfare Departments who are having a hard time providing for the actual necessities of life, let alone the luxuries. It is this group that deserves our sympathetic help and understanding. How to reach them is the problem. A liberal usage of the Plan would be expected by those in this group fortunate enough to have it. It is rather difficult and borders on the hardness of heart to deny hospitalization to the insured in these cases when it is known that the insured is having a difficult time keeping the Plan in force. Yet, experience has shown that surprisingly large numbers of this group elect to receive treatment at home, instead of going to the hospital, even though they have some form of pre-payment insurance. It seems that when life has been a struggle for survival, the family is more united and separation is fought against.

The question of diagnostic studies to permit thorough examinations is ever present. Patients with chest pains, for instance, present a difficult problem in differential diagnosis at times, requiring various special examinations. In rural areas usually there are not facilities to the extent that patients may be handled as out-patient cases. Invariably, many of these patients, who have hospital insurance, request the privilege of entering the hospital for these studies. The ever present problem arises. The poor group find it difficult to pay their way, and those having insurance, in many instances, feel they should be permitted to use it. A plan permitting part payment on x-ray and laboratory studies on an out-patient basis and, if possible, including one or two visits to the home, would help to lessen hospitalization, would help the lower income group financially, and would help the general practitioner in the rural areas to secure a more thorough examination of his patients. This benefit would likewise be reflected in an increased premium, but probably not to the extent that hospitalization would.

Can we develop a plan where coverage would be complete in the lower income group through Social Security or Welfare Department assistance? This group needs some plan where they should be allowed to pay as much as they can and the balance provided in some manner. We know, "that it is more blessed to give than to receive", and someone has said, "it is hell to be in the position to have to receive". A lesser premium to the lower income group with a larger premium to the higher income group would solve the problem if some practical way could be found to do it. In this manner, this group would feel they were carrying part of the load and this method would be less humiliating than an out-right grant.

There is only one kind of medical advice we should give and that is the best we are capable of giving. This advice is given to the poor as well as to the rich without knowing or even caring, except in the case of the poor, whether a pre-payment plan is held by them. Medicine is judged by the conduct of its representatives and we must do everything in our power to see that everyone, particularly the poor, receive the best we have to offer in time, sympathetic understanding, guidance and service. Medicine is a sacred calling and I believe ranks next to the ministry in importance and our chief concern must be good service to the sick. Money must not be permitted to cloud the crystal clear water of duty, opportunity and responsibility that is so obviously ours. If we approach our problems in a Christian spirit and let our conduct be in keeping with what we believe will be acceptable to the jury above, a solution to our problems that is honest and just will be forthcoming.

Annual Meeting, The Medical Society of Virginia

The Shoreham, Washington, D.C., October 27-30, 1957

Clinicopathological Conferences

Of The Medical College of Virginia Hospital

Prepared and Edited by

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Case #192 (A9191)

A FOUR-YEAR OLD colored female child was admitted to Dooley Hospital on July 18, 1956, because of high fever, cough, and diarrhea. The child had been well until ten days before admission, when she began to run a high fever, followed shortly by the development of rhinorrhea and a non-productive cough. She refused solid food, though she took liquids fairly well. She began to have 1-2 loose watery stools daily and vomited occasionally. Five days before admission she became delirious. She apparently was not seen by a physician until two days before admission. When she had not improved on prescribed therapy in 48 hours, she was referred to the hospital.

The child's birth and early development had been normal and diet had apparently been adequate. She had received her initial DPT immunizations in infancy and had had one booster. A smallpox vaccination had been given, but "did not take". The child had measles at age 2 without known complications. She had been subject to frequent colds and had "worms for a long time".

The child's mother was said to have died of tuberculosis when the child was one year old. One uncle was diabetic. No other details of the family history were known. The child lived with a grandmother on a small farm without modern sanitary facilities.

Physical Examination: T. 105. P. 110. R. 42. The child was well developed and acutely ill. The skin was hot and dry, but with good turgor. Mucous membranes of the mouth and throat were pale. The tonsils were large and injected. There was a mucopurulent nasal discharge. The ears were negative. The neck was supple. Scattered moist rales, rhonchi, and wheezes were present throughout the lung fields, more marked in the right lung posteriorly. There was no dullness. The heart was negative except for tachycardia. The abdomen was moderately distended and questionably tender. No masses were palpable. Rectal examination was negative as was the neurological examination.

Laboratory Data: Hemoglobin 8.6 grams, WBC 14,300, 69 polys. and 31 lymphs. The urine was essentially negative. Sickle cell preparation negative. Serum sodium 137, chlorides 95, potassium 2.3, CO_2 20 mEq/L, respectively. BUN less than 7 mgm.%. Blood sugar 100 mgm.%. Serology negative. Spinal fluid examination was entirely negative. X-ray of the chest showed a moderate pneumonic infiltration around the left hilum. Abdominal films revealed moderate distention and numerous short fluid levels "compatible with gastroenteritis or paralytic ileus".

Initial therapy consisted of parenteral fluids, penicillin, streptomycin, an expectorant, and 200 cc. of whole blood. It was necessary to do a venous cut-down at the ankle to administer fluids.

On the following day agglutinations were reported as positive for typhoid "O" 1-320 and typhoid "H" 1-40. Thereupon both penicillin and streptomycin were discontinued and chloromycetin, 250 mgm. IM q 6 h was begun. Parenteral fluids were continued with special attention to supplying potassium chloride. Gastric distention persisted and the child continued to run high fever. A gastric tube was passed without relief of the distention. On the afternoon of July 21st the patient's respirations increased to 60 per minute and became grunty. Her temperature, which had dropped to normal on the preceding evening, rose again to 102 and her pulse to 172. She began having green jelly-like stools and abdominal distention persisted. The chest was clear at this time. The leg in which the cut-down had been done became tender. A repeat chest film showed development of a right upper lobe density. An electrocardiogram showed only a sinus tachycardia. Agglutinations repeated on July 21st were reported as positive for typhoid "O" 1-160 and typhoid "H" 1-80. Blood electrolytes on July 21st, sodium 130,

chlorides 96, potassium 3.5, CO_2 14 mEq/L, respectively.

The child went steadily downhill, developed convulsions, and died on the evening of July 21, 1956. An autopsy was obtained.

Stool cultures were reported as negative. Blood cultures were not reported at the time of death.

CLINICAL DISCUSSSION

Dr. Thomas S. Chalkley*: First, may I say

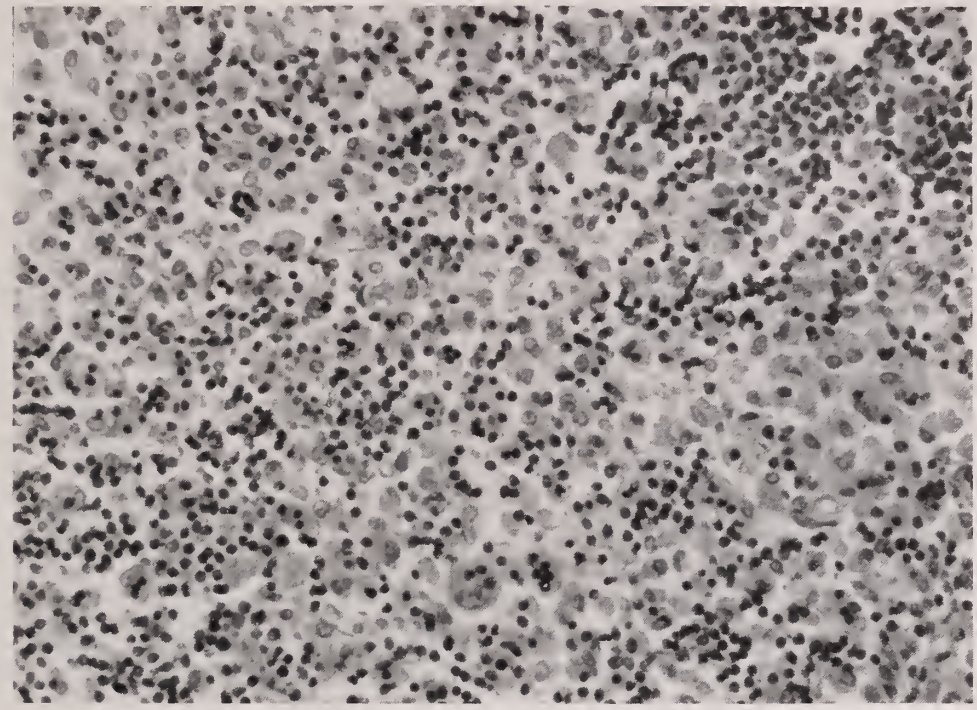


Fig. 1—A photomicrograph of a mesenteric lymph node showing marked reticulo-endothelial hyperplasia. Many of the large mononuclear cells are phagocystic.

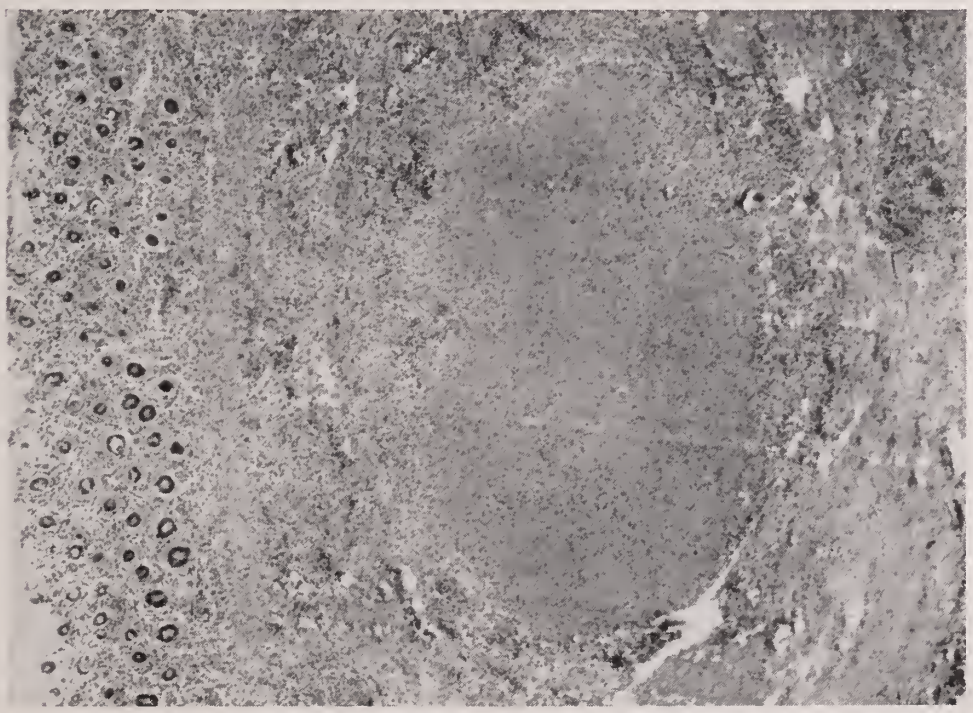


Fig. 2—A section of the colon showing necrosis of a lymph follicle in the submucosa.

* Assistant Professor of Pediatrics, Medical College of Virginia.

not to be too critical of the doctor who saw this child originally, and then did not send it into the hospital until 48 hours after onset of treatment. Obviously this child had not been too sick or we could assume that the grandmother would have called the doctor sooner. Many times just plain old "intestinal grip" can run a prolonged course like this. She probably was put on one of the sulfa drugs or antibiotics which did not give any clinical response. In fact, it helps us to rule out just plain dysentery if we can know that this was the procedure followed.

The history of worms is non-contributory unless we can assume that they were ascaris and had crawled up into the pancreatic duct and caused a rare case of acute pancreatitis.

The active tuberculosis contact could be very important but for the fact that a child dying with the illness certainly by this time would have it evident in the x-rays of her lungs.

The lack of sanitary facilities coupled with a ten day illness of diarrhea and cough, not responding to ordinary medication, and then having a relative high fever, low pulse, and good skin turgor and abdominal distention upon physical examination, all strongly suggest typhoid. Of course the agglutinations for typhoid "O" being 1-320 (anything over 1-160) is diagnostic for active infection with typhoid. Typhoid will commonly have symptoms of bronchitis early and then end terminally with broncho-pneumonia.

The x-ray diagnosis of paralytic ileus also fits the typhoid picture. The low hemoglobin could be due to loss of blood or to just a nutritional deficiency.

I am at a loss to explain the hypopotassemia without the corresponding reduction of sodium unless the child in need of immediate fluids was given NaCl before the electrolytes were drawn. The potassium probably was lower due to the lack of protein intake and poor metabolism of that taken. There is a mild state of acidosis present easily explained upon the basis of the diarrhea. The low BUN is due to a lack of protein.

I think the treatment was sensible and adequate.

I think it was right to have done the spinal tap in spite of the negative neurological. A negative urine and normal blood sugar rule out diabetes. A negative E.K.G. and absent joint pains rule out rheumatic fever.

The lack of blood in the stool, negative stool cultures, good tissue turgor, and lack of response to therapy, all tend to rule out common dysentery.

Mesenteric thrombosis would have produced more shock, probably less fever, and more abdominal pain.

Intussusception would not have continued to have bowel movements, and would have died sooner and would have been in more shock.

Volvulus would have given more shock, less bowel movements, and more abdominal pain

"I shall with reluctance overlook the fact that there was no severe abdominal pain, and no mention of a rigid belly the day before death, and say that a case of typhoid having a drop in fever followed by a rise in pulse as appeared in this case usually means perforation, although lung changes with overwhelming toxemia could do the same.

The terminal convulsions were probably due to cerebral edema.

In summary, I think that this is a case of typhoid fever with hypopotassemia, mild acidosis, paralytic ileus, and cerebral edema. There is also a terminal pneumonia and probably perforated gut.

Dr. Thomas S. Chalkley's Diagnosis

Typhoid fever with probable perforation of the intestine. Cerebral edema. Terminal bronchopneumonia.

Pathological Diagnosis

Typhoid fever. Congestion and edema of lungs. Congestive splenomegaly. Fatty changes of heart. Fatty changes of liver. Cloudy swelling of kidneys. Cerebral edema. Hydrothorax 150 cc. bilateral, ascites 150 cc. Hydrops of gallbladder, secondary to cystic duct stenosis.

DISCUSSION OF PATHOLOGIC FINDINGS

Dr. Lester F. Belter*: In many ways this case was especially selected for students as they are prone to discount the infectious diseases since the advent of antibiotic therapy. As late as 1953 the World Health Organization lists over 6,000 cases of typhoid and para-typhoid fever reported within the United States, 2,252 of these in 1953 were typhoid. This case adequately demonstrates that along with morbidity we are still seeing mortalities from typhoid fever.

The case under discussion for today represents a relatively straightforward case of typhoid fever and it may be well to add at this time that a blood culture drawn the day of death grew out E. typhosis. The gross and histological changes, though mild, are considered typical. Dr. Chalkley had no difficulty in making the diagnosis of typhoid fever and only the clinical course in this case offered an interesting problem to the clinician.

The autopsy performed four hours after death

* Assistant Professor of Pathology, Medical College of Virginia.

revealed a 39 inch well developed, well nourished, four year old colored female, in a fair state of hydration and without evidence of external abnormalities. There were no palpable masses and peripheral lymph nodes were not enlarged. The subcutaneous fat tissue was not remarkable and there was approximately 150 cc. of clear yellow fluid in each pleural cavity and the peritoneal cavity. The heart weighed 85 grams and was dilated. The lungs had a combined weight of 370 grams. They revealed congestion and edema, the latter being most marked in the right upper lobe. The spleen was enlarged, weighting 130 grams. The cut surface was deep red and normal markings were obliterated. The liver weighed 750 grams, was slightly mottled, pale yellow and brown without gross focal lesions. The gallbladder was gray-white, thin walled and contained approximately 15 cc. of clear viscid material. An old, either congenital or acquired stenosis of the cystic duct was present. The kidneys weighed 75 grams each and showed cloudy swellings. The mesentery was enlarged by a mass of lymph nodes measuring up to 2 cm. in diameter. The lymph nodes were discrete and on cut surface were reddish gray, soft and contained small hemorrhagic foci. The brain weighed 1250 grams and showed only slight edema and congestion. The stomach was not remarkable. The small intestines contained a small amount of bile stained viscid material. In the terminal ileum the Peyer's patches were enlarged and light pink without gross areas of ulceration. The submucosal lymph follicles of the colon were prominent. Several small elevated round plaques with superficial ulcerations without evidence of hemorrhage were present in the cecum and ascending colon. These plaques measured up to 8 mm. in diameter.

Histologically, the ileum, colon, lymph nodes, spleen, liver and bone marrow showed typical focal lesions composed of massive proliferation of reticulo-endothelial cells. Many of the reticulo-endothelial cells contained phagocytized nuclear debris and broken down red blood cells (Fig. 1). In some of the lymph nodes necrosis of the proliferated reticulo-endothelial cells was present and microscopic foci of necrosis of the intestinal mucosa were noted in some of the Peyer's patches overlying the areas of necrosis within the lymphoid tissue (Fig. 2). The lungs revealed only edema and congestion. The misleading chest x-ray being the product of a localized area of increased pulmonary edema. This type of focal pulmonary edema is seen from time to time and on x-ray will simulate focal areas of pneumonia. The cause of death was attributed to "toxicity leading to metabolic and circulatory disturbances". There was no evidence of perforation.

Tests Detect Other Diseases

The standard laboratory tests for syphilis at times help detect other diseases even before their physical symptoms appear, according to a guest editorial in the March 23 Journal of the American Medical Association.

Dr. Charles R. Rein and Louise C. Kelcec, M.T., of the New York University Post-Graduate Medical School and University Hospital said that persons who react positively to the standard syphilis tests—although they do not have syphilis—frequently already have or later develop one of the degenerative diseases. This false-positive reaction occurs especially with rheumatoid arthritis and lupus erythematosus, a very serious skin disease. These patients may have positive test reactions one or more years before recognizable symptoms appear.

Because of the recent development of highly specific tests for syphilis, many laboratories are considering discarding the routine standard tests. However, this is not advisable, since they are still the most effective screening device for syphilis. In addition, they offer—through the false-positive reaction—a means for early detection of such diseases as rheumatic fever, periarteritis nodosum (a heart disease), and scleroderma (a skin disease).

The false-positive reaction also eventually may play a role in helping researchers find the cause of lupus erythematosus and understand how it develops, they said. False-positive reactions occur in patients who react adversely to the prolonged use of hydralizine hydrochloride (Apresoline) for the treatment of hypertension. Because this drug reaction causes symptoms similar to those of lupus erythematosus, it might be used as a tool for studying the disease.

Mental Health . . . .

James B. Funkhouser, M.D.

The Use of the Electroencephalogram in Virginia's State Hospitals

Although Falret correctly identified them nearly a century ago (1860) and the concept has been considerably validated by outstanding neurologists such as W. R. Gowers, Hughlings Jackson, Kinear Wilson, Purves Stewart, and Foster Kennedy, most medical men and some psychiatrists have, until recent years, tended to overlook the importance of the psychic "equivalents" of epilepsy.

Lately, with increasing frequency and dependability, the electro-encephalogram has been able to demonstrate objective evidence of a physiological disturbance in the brain of certain individuals, unsuspected of epilepsy, who had been mistakenly diagnosed as suffering from "hysterical" fugues, amnesias or automatisms.

The young German science of electroencephalography was subjected to belated recognition because of World War I. Gibbs classification of the epilepsies appeared in the literature less than 15 years ago. At that time the production of modern EEG equipment was impeded because manufacturers of electronic equipment were making the machines of war. Electroencephalography has not been generally available to most physicians until quite recently unless they were working in connection with, or in the vicinity of, a large medical center.

Both medical and legal forensic experts, however, in the past 10 years have become so impressed with the evidentiary value of electroencephalography that it is now doubtful whether a person examined for the Courts, because of a crime committeed during a temporary mental disturbance, can be considered to have had a complete psychiatric examination unless an electroencephalogram has been obtained.

For this reason, a modern laboratory was set up at Southwestern State Hospital (which has a large Criminal Insane Department) in May of 1950. This was the first such modern diagnostic facility to function fully in the Virginia State Hospital system, though a machine had been placed at the Lynchburg Training School somewhat earlier. Soon afterwards laboratories were established at other Virginia State Hospitals. At the present time all of the State Hospitals in Virginia have modern EEG laboratories.

Electroencephalography is singularly useful in the identification and study of the "partial" seizures which often masquerade as psychic disorders. For this reason it has been of particular interest to psychiatrists. But other medical specialists often call upon the services of an EEG laboratory to help in the differential diagnosis of unusual conditions. The neurologist and neurosurgeon sometimes find it helpful in localizing structural brain disease. The pediatrician (who is usually the first to be consulted in a new case of epilsepy) may want to know the type of seizure and the prognosis of the condition. The orthopedic surgeon and rehabilitation experts are benefited if they know the extent of the damage in cerebral palsy. The anesthetist and radiologist may want EEG recordings because of questionable or doubtful cases of damage to the brain from anesthetic accidents or radiation. The internist may usefully employ the machine in cases of syncope, and in metabolic disorders, which sometimes involve cerebral functioning. Cerebral vascular accidents and possible brain metastasis are often times revealed by EEG. The otolaryngologist faced with speech or hearing defects, the opthalmologist who is interested in central visual defects, the obstetrician who would differentiate toxic eclampsia from idiopathic epilepsy, all have occasional use for the technique.

In some areas Virginia State Hospital laboratories have furnished and are continuing to furnish service to the local medical community when there has been a delay in the acquisition of EEG machines and technicians by local general hospitals or clinics.

But, although it has actually been of more practical value to neurosurgeons, neurologists and pediatricians, it is the psychiatrists who have taken the lead in Virginia so far as developing EEG laboratories is concerned. Today recent developments in pharmacology have directed scientific psychiatric attention away from philosophical and psychological explanations for illness and more toward neurophysiology. The EEG holds promise of being one of the most important diagnostic tools in psychiatrists' hands. Virginia's State Hospitals are equipped and ready for such hopeful developments.

Meanwhile the staff members of our State Mental Hospitals are finding the instrument increasingly useful in correctly identifying the psychic equivalents of epilepsy which have been so long neglected.

James B. Funkhouser, *M.D., Director of Training and Research, Department of Mental Hygiene and Hospitals Richmond, Virginia.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Reporting Communicable Diseases

For several centuries the medical profession was divided on the causes of epidemic diseases. There were the non-contagionists, who believed that the responsible agents were gaseous and were associated with emanations from decomposing organic matter, effluvia, and miasma. There was a smaller group, the contagionists, who believed that there was a germ of some kind associated with contagion. In the latter part of the nineteenth century Koch, Pasteur and others showed a causative relationship between specific micro-organisms and certain infectious diseases. Through the years following these studies, the part played in the transmission of infectious diseases by carriers, unrecognized and subclinical cases, common water and food supplies, arthropod vectors, and animal reservoirs has been brought to light. There has been continued advancement in the treatment and prevention of communicable diseases.

The first step toward control of communicable diseases is notification to the local health authority that a case exists within his jurisdiction. If there is to be comparability of data dealing with a particular disease, there must be uniformity of reporting within the state, the nation, and the world. It is the legal and ethical obligation of every practicing physician to make these reports.

Adequate knowledge of communicable diseases requires a system of reporting that functions not at one, but at four levels. Basic data are collected in the locality where the disease is present. Reports from localities are assembled next at the State level. These are sent to the Public Health Service, the organization within the Department of Health, Education, and Welfare, which deals with them at the national level. Finally, the national health authority reports certain prescribed diseases to the World Health Organization.

Each level has its responsibilities for control of disease and each needs the exchange of current information on prevailing diseases and their frequencies. A return report by the higher jurisdiction is important. In this way the local authority is provided with the knowledge of diseases prevailing not only within his own area but also outside, and with an indication of points from which diseases might invade his area. Primary concern is given to the first two stages of the reporting system, the collection of data at the local level and at the State level.

The local health director each week mails to the physicians practicing within his jurisdiction a card on which to record disease, name of patient, address, color, sex, and age. The card is stamped with a date showing for what week the report is made and a self-addressed envelope is provided for its return to the health department. On the card are listed the diseases to be specifically reported and a notation calling for the report of "any other disease of public health importance not listed above". This deals with a disease that is not usually reported but which, by reason of undue frequency or severity, should be brought to the attention of the health director. Prompt reports of outbreaks of disease of public health importance should be made to the director by telephone. Cases of food poisoning would be in this category. A disease which is one of the six internationally quarantinable diseases—cholera, plague, louse-borne relapsing fever, smallpox, louse-borne typhus, and yellow fever—should be reported to the local health authority by telephone, telegraph, or other rapid means.

On the return of the cards, the reported diseases are listed and tabulated in the local health department, notes are made as to the need for visiting or for epidemiologic investigation, and thought is given as to the possibility of the development of an epidemic. The cards are then forwarded to the Bureau of Communicable Diseases of the State Department of Health, where the information is recorded for each county and city by disease, name, address, age, sex, color, and physician reporting. Date of onset of the more important diseases is obtained by follow-up. The number of cases of each reportable disease is sent by wire to the Public Health Service on Tuesday of each week following compilation from the cards forwarded to the State Department of Health. Follow-up epidemiologic reports are sent in duplicate in writing on certain special diseases as brucellosis, psittacosis, tularemia, etc.

On Wednesday of each week a return report is made by the Bureau of Communicable Diseases to the local health departments and reporting physicians for the week ended the previous Saturday. This report lists the special reportable diseases by totals in county or city reporting and total in State. "Other Diseases", as hepatitis, measles, pertussis, and streptococcal infections, are listed only by total in the State.

The value of any one of these reports is limited by the completeness of each report in both numbers and content. The true picture is seen only when every physician conscientiously assumes his obligation and makes his report of the communicable diseases that he sees in his practice. If reports are missing at the local level they will be missing at the state, national, and world levels. The State Department of Health is fully aware of the heavy load that the physician is bearing and of the excellent medical care that he is providing under pressure. There is evidence that the busy doctor is frequently the one who is most prompt and conscientious in his reporting. When reporting is incomplete the primary services that the health department may render are lost. Illness or death that might have been prevented may result from failure to report communicable diseases.

Monthly Report of Bureau of Communicable Disease Control

	Mar. 1957	Mar. 1956	Jan.-Mar. 1957	Jan.-Mar. 1956
Brucellosis	2	4	5	5
Diphtheria	2	5	2	15
Hepatitis (Inf.c.)	57	53	139	165
Measles	923	4168	1651	6700
Meningococcal Infections	8	9	21	28
Meningitis (Other)	18	15	47	38
Poliomyelitis	4	2	8	4
Rabies (In Animals)	32	55	90	128
Rocky Mountain Spotted Fever	0	1	0	3
Streptococcal Infections	1205	889	2299	1975
Tularemia	2	2	15	4
Typhoid Fever	4	1	12	2

Conventions in Two-Way Communication

Two of the world's great medical confraternities—the physicians of the United States and the United Kingdom—will be linked across the Atlantic via the new underseas cable on Wednesday, June 5. Thus, for the first time in history, two medical conventions on different continents will be in direct, two-way communication.

Arranged by Smith, Kline & French Laboratories, Philadelphia pharmaceutical manufacturers, the hook-up will join the American Medical Association, then in annual session in New York, and the Harvey Tercentenary Congress, convened in London to commemorate the 300th anniversary of the death of William Harvey, the English physiologist who first described the circulation of the blood.

Fittingly, doctors both in New York's Carnegie Hall and London's venerable Great Hall of the Royal College of Surgeons will discuss: "The Results of Cardiac Surgery."

Invitations will be sent members of the medical profession to attend the Carnegie Hall portion of the meeting, which gets underway at 10:15 a.m. (EDT).

In New York, the participants will include Drs. Michael E. De Bakey, Baylor University, chairman of the American panel; Alfred Blalock, Johns Hopkins University; John H. Gibbon Jr., Jefferson Medical College; Frank L. A. Gerbode, Stanford University, and George E. Burch, Tulane University.

In London, Sir Clement Price-Thomas of Westminster Hospital will head an international panel including Sir Russell Brock, Guy's Hospital, London; Professor G. d'Allaines, Paris, and Dr. Maurice Campbell, also of Guy's Hospital.

Immediately before the opening of the trans-Atlantic cable link, the New York panel will summarize for the A.M.A. audience four papers which will have been presented by the London panelists.

With the opening of the link, the inter-continental roundtable will discuss, back and forth across the Atlantic for more than an hour, the findings of the Harvey participants.

Coincidental with the trans-Atlantic conference, a crew of the SKF Medical Color Television Unit will be in Britain to provide closed-circuit medical television for doctors there. The five medical conventions to be televised—including portions of the Harvey Tercentenary Congress—will mark the first time the SKF unit, the only one of its kind, has visited the United Kingdom. The tour has the approval of the U. S. State Department.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Why Not More Out-Patient Services?

The articles which have appeared on this Pre-Paid Medical Care page have prompted several physicians to write letters of inquiry—usually about Blue Cross-Blue Shield arrangements. Assuredly inquiries are invited. An understanding on the part of the profession about the "Why's and Wherefore's" of Plan operations is essential to the continued success, the further growth and development of Blue Cross-Blue Shield's community-service endeavor. Questions of general interest, such as the following, will be discussed on this special page of the Monthly.

Question: "I agree with your arguments against a 'deductible' type of Blue Cross-Blue Shield Contract, but why don't the Plans develop an ambulatory-patient program that will eliminate the existing financial incentive for unnecessary hospital stays, those that are primarily for x-ray examinations or other diagnostic procedures? They would more frequently be done on an out-patient basis if they were covered."

Discussion: The Plans realize, of course, that if all health-care services could be made available through prepayment, those services which were *medically* appropriate would be the ones used. Instead of fitting medical needs into an artifically restrictive contractual design, doctors and patients would then permit only medical considerations to govern medical care.

But no program—excepting, perhaps, a program that is underwritten and operated by a government —can cover all items of health-care expense; the prepayment rates would be far beyond the willingness, if not the ability, of people to pay. Some health-care expenses, usually the minor expenses, necessarily are left to the individual to pay for directly. Unfortunately, however, people so dislike the necessity of meeting even these minor expenses that they omit them from the family budget. And then when such expenses are inevitable they want to by-pass them by misusing the funds they have budgeted and prepaid toward major health-care expenses,

It is a worrisome situation—but understandable. Similarly, it is worrisome—but understandable—that there is a constantly increasing interest in governmental control of the nation's $10.5 billion annual health-care expenditure but little or no interest in governmental control over the way $14.5 billion is being spent for liquor and tobacco.

Blue Cross-Blue Shield takes care of emergency out-patient services and a few other ambulatory-patient services, and it attempts to take care of just about all the expenses a patient incurs when he's sick enough to be admitted to a general hospital. But some doctors, and all too many subscribers, fail to recognize the emphasis which the Contracts place on the necessity of the expensive in-patient care the Plans expect to pay for. Quite often in-patient admissions are arranged for the convenience of either the patient or the doctor, or of both. Such admissions sometimes are definitely desirable from the patient's or his family's point of view. But unless the *patient's physical condition* is such that a general hospital bed is the only proper place for that patient to be, he is supposed to take care of all the expenses involved directly out of his own pocket-book.

Blue Cross-Blue Shield is hesitant about offering an ambulatory care program because the same factors which predispose misuse of in-hospital facilities would be involved—only more so—if prepaid services were available to ambulatory patients. The usual appearance of a public picnic ground indicates that all too many people either are devoid of social consciousness or eschew social responsibilities. As a matter of fact, there are not enough doctors to handle all of the ambulatory diagnostic care folks would demand if they felt it was "coming to them" by virtue of their Blue Cross-Blue Shield membership.

Because, however, an ambulatory-care program theoretically would result in an ultimate saving of medical-care dollars, the Plans have been studying the problems entailed. But they have not yet determined how to steer such a program around a dilemmatic obstacle: Human nature being what it is, an "uncontrolled" ambulatory patient program probably would be flagrantly misused, but if the

program were to be "controlled" with "deductibles" and "co-insurance" mechanisms, the extent of the controls necessary would make the program unattractive to the public and very few persons would subscribe to it. Also, if an ambulatory patient program were to be incorporated into the regular Contracts, the concomittant increase in prepayment rates would cause many persons to drop their memberships and lose their coverage for in-hospital services; if the program were optional, a supplemental endorsement to the regular Contracts, the number of people voluntarily accepting the additional expense probably would not be large enough to bring about a significant reduction in the current rate of unnecessary utilization of in-patient services.

Nonetheless, the Plans are not content to sit down in front of these obstacles. In their thinking, they are running back and forth like a bird-dog confronted by a hog-wire fence, trying to find a way under, over, or around—and some day they will succeed.

But that is looking to the future. Now most ambulatory care—and any care that could be properly provided while the patient remains ambulatory—is specifically excluded from the Blue Cross-Blue Shield Contract. Despite the seeming paradox, there are cogent reasons why a subscriber now is eligible for actually hundreds of dollars worth of care when certain circumstances prevail but, under other circumstances, is ineligible for less expensive care (which, however, he should be able to pay for directly without undue financial hardship). Although relatively inexpensive in any given case, the aggregate expense of ambulatory care could not be met by the Plans unless their prepayment rates were so high they would be deemed prohibitive by many of the folks here in Virginia (average total family income: $3,750).

Varicose Leg Ulcers

A new rapid method for treating varicose vein ulcers by using human placenta has been described by Dr. Fred R. Denkewalter, department of surgery, Ohio State University College of Medicine, Columbus. The treatment is similar to one devised for war wounds by a French army doctor.

He said in the American Medical Association's March Archives of Surgery that the method does not give a "permanent cure" to the problem of chronic leg ulcers. However, it does reduce the time and expense necessary for relieving the condition, while giving the patient complete freedom of movement. The time necessary for healing of the ulcers is a matter of weeks instead of months as with older methods.

The placenta is the round, flat organ within the womb which establishes communication between mother and child by means of the umbilical cord. As soon after delivery as possible, one layer of the placenta is washed with a salt solution, cut into cubes, and stored in jars. It can be kept in an ordinary refrigerator for as long as three weeks. The cubes are cut into the required shape and placed in the ulcer crater after it has been cleaned. The ulcer is then covered with gauze and an elastic bandage. The dressing must be changed at intervals.

Dr. Denkewalter used placenta to treat 22 varicose ulcers. Sixteen of these ulcers were obliterated during the first seven weeks of treatment, eight requiring four weeks or less for complete healing. In the others, a second application of placenta was necessary.

Placental tissue "by its very nature is concerned with cellular growth" and it seems reasonable that the placental cells stimulate the growth of new cells in the ulcer crater. The placental cells contain hormones, enzymes, vitamins, immune bodies, nutrients, and various other "chemical building blocks" which have a favorable effect on cellular growth. It is also possible that the placental material acts as a "lattice" through and around which healthy tissue may grow.

The placenta treatment for six leg ulcers from other causes, including hardening of the arteries and burns, was generally unsuccessful.

Woman's Auxiliary . . . .

President—Mrs. Lee S. Liggan, Irvington
President-Elect—Mrs. John R. St. George, Portsmouth
Vice-Presidents—Mrs. Maurice Bray, Suffolk
Mrs. J. Rollins McGriff, McLean
Mrs. H. H. Howze, Norton
Recording Secretary—Mrs. James R. Grinels, Richmond
Corresponding Secretary
Mrs. A. B. Gravatt, Jr., Kilmarnock
Treasurer—Mrs. Robert H. Detwiler, Arlington
Publication Chairman—Mrs. Paul Pearson, Warsaw

Tazewell.

The Auxiliary to the Tazewell County Medical Society met at the River Jack in Tazewell for a luncheon meeting on March 15th. After a brief business meeting, new officers were elected as follows: President, Mrs. Rufus Brittain, Tazewell; president-elect, Mrs. Joe Robinson, Richlands; secretary, Mrs. Dan Goodykoontz, Bishop; and publication chairman, Mrs. Howard H. Ballard, Pocahontas.

Plans were discussed for Doctor's Day and the expected visit of the State Auxiliary President, Mrs. Lee S. Liggan.

Ethel P. Ballard,
Publication Chairman

Warwick-Newport News.

This Auxiliary met on March 27th at the home of Mrs. William Goldsmith, with Mrs. Frank Beazlie, president, presiding. Reports of committee chairmen were heard and particular interest was shown in the plans announced for the annual observance of Doctor's Day. A donation in honor of the local doctors was made to the Patrick Henry Hospital for the Chronically Ill. The Auxiliary honored on that day Dr. J. Hughes Mabry, a well-beloved physician who had practiced in Newport News for fifty-six years. A biographical article about him appeared in the local newspaper, and he and Mrs. Mabry were guests of honor at a picnic held at the summer cottage of Dr. and Mrs. T. C. Lawford.

Mrs. Lee S. Liggan, State President, and Mrs. J. R. St. George, President-Elect, were guests at this meeting.

Wise.

The Auxiliary to the Wise County Medical Society held their March meeting at the home of Mrs. C. H. Henderson with Mrs. Walter Parsel as co-chairman.

There was a discussion of combining efforts with those of the Graduate Nurses Association in establishing scholarship funds and means of developing interest of the Wise County high school students in nurse training.

The following new officers were elected: President-elect, Mrs. N. H. Short; vice-president, Mrs. J. H. Dellinger; corresponding secretary, Mrs. W. F. Schmidt; and recording secretary, Mrs. Charles Swecker.

Billie P. Dellinger (Mrs. J. H.)
Publicity Chairman

Arlington.

On February 19th, the Arlington Auxiliary held a dessert-card party at the Barnes and Kimel Auditorium in Clarendon. There being an overflow attendance, Mrs. V. J. Dardin had seven tables at her home on Leesburg Pike. Mrs. Roy Halguist, who is active in many civic affairs in Arlington, donated a $25.00 Savings Bond to the affair and this was raffled off. This event was for the benefit of the Arlington Community Hospital which is in the midst of an extensive building program.

On March 30th, this Auxiliary celebrated Doctor's Day by holding a Buffet-Cocktail Party in the Colonial Room at Ft. Myer. There was a large attendance and was a most delightful affair. Entertainment, both instrumental and vocal, was supplied by the more talented of the group. Mrs. Robert Mitchell and Mrs. Sydney Lyons were in charge of arrangements.

The Auxiliary arranged for both the buffet luncheon and cocktail party in connection with the 8th Annual Northern Virginia Clinical Assembly on April 7th. Mrs. Kay Ostergaard was in charge of these arrangements.

The Arlington, Fairfax and Alexandria Auxiliaries held a joint meeting on April 16th at the Army Navy Country Club. Mrs. Lee S. Liggan, president of the State Auxiliary, and Mrs. J. R. St. George, president-elect, were honor guests. The Arlington group was is charge of luncheon arrangements.

Edith B. Sterrett (Mrs. H. D.)
Publicity Chairman

Richmond.

The annual public relations luncheon of this Auxiliary was held on March 15th. Presidents of the various woman's organizations throughout the city were guests. A panel discussion on Health Cover-

age in Richmond was participated in by Drs. Charles M. Caravati, Donald S. Daniel, Edward M. Holmes, Jr., and Charles Outland. Mrs. William Barr and Mrs. James Grinels were chairmen of the meeting. Mrs. Charles Byrd and Mrs. F. Elliott Oglesby were luncheon chairmen, and Mrs. Gordon D. Hall in charge of flowers.

Fairfax.

The annual luncheon meeting of this Auxiliary was held on April 2nd at the Courthouse Country Club. Each committee chairman and the president gave her annual report. Mrs. Emmanuel Newman, president, gave a report of the Virginia State Board meeting which she and Mrs. Thomas E. Haggerty, Mrs. Henry T. Kulesher, and Mrs. Gordon Zimmerman recently attended.

The members voted to send a contribution to the newly organized Student Loan Fund and to raise the dues $1.00 for the State Treasury. It was also reported that this Auxiliary will be in charge of registration at the annual meeting of the State Society in the fall.

The following officers for the coming year were installed: President, Mrs. Andrew Tessitore; vice-president, Mrs. Thomas E. Haggerty; recording secretary, Mrs. Ardwin H. Barsanti; corresponding secretary, Mrs. Edmund Morales; and treasurer, Mrs. G. J. Inguagiato.

Helen M. Barsanti
Chairman, Publicity Committee

Woman's Auxiliary to the American Medical Association.

The thirty-fourth Annual Meeting will be in New York June 3-7, with headquarters at the Hotel Roosevelt. Registration will open on June 2nd and continue through the 6th. On Monday and Wednesday afternoons there will be round table discussions of interest and educational value to all physicians' wives. The general meeting will be held on Tuesday, Wednesday and Thursday. Social activities include a tea honoring the president and president-elect on Monday, a luncheon on Tuesday, honor in national past presidents, a luncheon on Wednesday in honor of the National president and president-elect, and on Thursday the annual dinner for auxiliary members, husbands and guests.

Mrs. Harry F. Pohlmann, Middletown, New York, is convention chairman for this meeting.

Can Now Safely Bear Children

Patients with congenital heart disease formerly died, but advances in heart surgery during the last 15 years have made it possible for them to live and even to bear children.

Five Detroit doctors reported the successful delivery of a normal child by a woman who had undergone a "blue baby" operation in childhood. The doctors said they know of only three other such cases.

The report in the February Archives of Internal Medicine, published by the American Medical Association, was made by Drs. Jack M. Kaufman, Lucien A. Campeau, Paul E. Ruble, Joseph Monahan, and F. D. Dodrill.

The 20-year-old woman had undergone surgery for tetralogy of Fallot, a condition in which a defect in the artery between the heart and lungs prevents the blood from getting enough oxygen. The lack of oxygen causes a blueness of the skin. She underwent one operation at the age of nine and another at 14. She has since been well and has lived a normal life. Her pregnancy was normal, except for repeated episodes of impending labor during the last seven weeks. This is a common experience for pregnant cardiac patients, the doctors said. The baby, who was normal and vigorous, was delivered four weeks prematurely. The mother made an uneventful recovery.

The doctors said that definite conclusions cannot be drawn from the study of only four cases, but they suggest that the outcome of pregnancy in surgically treated tetralogy of Fallot patients "may not be as unfavorable as previously thought and that normal pregnancy and delivery may be expected." However, they warned that this optimism should not jeopardize the careful management of these cases. The patient should be watched closely for excessive weight gain and for signs of heart difficulties during the pregnancy, and special precautions should be taken during delivery.

Current Currents

THE VIRGINIA DEPARTMENT OF WELFARE AND INSTITUTIONS has released a report covering the ten year existence of the State-Local Hospitalization Program. Established by the General Assembly to encourage and assist counties and cities to provide hospital treatment for the medically indigent, the Program has cared for over 90,000 patients in general hospitals at a cost of over $12,500,000.

According to the report, 12,499 were hospitalized during the past fiscal year at a total cost of $1,961,071. The State appropriation of $800,000 permitted reimbursement on these expenditures to the extent of $765,000. The average per capita expenditure on a state-wide basis was 58 cents. The average per capita for cities was 90 cents as compared with 39 cents for the counties.

Seventy-one Virginia hospitals and 26 out of state hospitals provided over 140,000 days of care at inclusive ward rates based on cost or less than cost.

Physicians and surgeons who are members of the service staffs of participating hospitals provided the necessary medical and surgical services for all patients without charge. The medical profession's large contribution to the care of indigents can be seen, to some extent, in the following types of treatment provided through the programs: surgical, 4,770 cases; medical, 5,759 cases; obstetrical, 1,281 cases.

YEAR-ROUND POLIOMYELITIS VACCINE CAMPAIGNS will be conducted by organizations active nationally in this work. This decision was reached at a recent Washington meeting attended by representatives of the American Medical Association, the National Foundation for Infantile Paralysis, the Association for State and Territorial Health Officers and the U. S. Public Health Service.

The group agreed to maintain the goal of vaccinations for all persons up to the age of at least 40, at the same time advising that where supplies are limited, emphasis should be given first to those under 20 and pregnant women. The representatives agreed on a continuing campaign because, in addition to preventing paralytic poliomyelitis, a steady demand will help avoid the supply problems of the past few months. An oversupply had accumulated by January. Then, with the AMA's and other campaigns becoming effective, the national surplus was used up and local shortages developed.

THE PRINTING OF FAMILY HEALTH RECORD BOOKLETS has been authorized by the AMA Board of Trustees. It is planned to have this attractive 12 page booklet distributed through state medical societies. The booklet will serve as a repository for pertinent medical information on each member of a family. Full distribution plans will be announced shortly.

CONTRIBUTE NOW TO THE AMERICAN MEDICAL EDUCATION FOUNDATION

ONE OUT OF EVERY FIVE VIRGINIANS is a Blue Shield subscriber, according to figures recently released by the National Association of Blue Shield Plans. The State total of Blue Shield members is 606,000.

Nationally, enrollment in Blue Shield Plans has grown from less than two million members in 1946, to almost thirty-six million. During the past year, Blue Shield Plans gained over three million subscribers, a net increase of 8.6 per cent.

THE PHYSICIAN'S SECRETARY can save him a tremendous amount of time by performing many of the semi-technical, and most of the business activities, in the office—if she is well-trained and possesses certain important personal qualities. This was revealed recently in a nationwide study completed by Mr. Harold Mickelson, Division of Business Education, Northeast Missouri State Teachers College. The AMA cooperated in the survey.

Mickelson analyzed the activities performed in physicians' offices, classifying them in three categories: (1) highly technical medical activities which, under normal conditions, only a physician can perform; (2) semi-technical medical activities which may be performed satisfactorily by medical office personnel under the supervision of the physician, and (3) business office activities of a routine or management nature which are ideally performed by the secretary or aide.

His survey points out that "physicians are not making maximum use of their extensive training when they unnecessarily perform semi-technical medical and business activities." To help doctors determine what responsibilities can be delegated properly to office personnel, Mickelson is currently preparing a system for assigning duties which will be furnished to medical societies by the AMA within the next few months.

THE GROWING INTEREST IN HEALTH LEGISLATION is indicated by the number of bills introduced during recent sessions of the Congress. These bills cover just about every phase of medicine and human welfare. The figures below are certainly illuminating:

250 measures, 1951-1952, 82nd Congress
407 measures, 1953-1954, 83rd Congress
571 measures, 1955-1956, 84th Congress

SECRETARY FOLSOM has presented to Congress the 1957 version of the Administration's bill for grants to medical, dental, osteopathy and public health schools to assist in building and equipping teaching facilities. Last year, Congress authorized $30 million a year for three years, with the money restricted to medical research facilities and equipment.

The Administration now proposes to add $15 million to the research fund for the next fiscal year, making a total of $45 million to be used to help pay for teaching as well as research buildings and equipment. The following year the total for the combined fund would go up to $50 million, where it would remain for the next two years.

The Medical Society of Virginia . . . .

Membership Roster

April 1, 1957

This roster is published as a service to the membership and your editors hope you will find it a handy and ready reference.

Although the list has been checked carefully, it is not improbable that an omission, or other errors, will be found. Addresses shown are those used by the State Office for mailing purposes.

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Van Name, A. L., Jr.
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Vaughan, David D.
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Vaughan, Edwin D.
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Vaughan, George D.
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Vaughan, Judson T.
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Walker, Thomas
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Wallerstein, Emanuel
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Ward, C. Harper
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Weaver, W. Lawrence
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Weinstein, Julian
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Weinstein, Samuel
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Whipple, Dorothy V.
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White, Fred D.
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Whitehead, W. M.
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Whitehill, M. Richard
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Lewis-Gale Hospital
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Williams, Armistead D.
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Williams, Ennion S.
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Williams, H. Joseph
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Williams, John F.
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Physics Helps Explain Atherosclerosis

The principle of physics on which the airplane's airfoil and many hydraulic devices have been based also helps explain the development of various circulatory disorders, according to a New York physician. In fact, the motion of fluids as formulated in "Bernoulli's theorem" is a primary factor in the development of atherosclerosis, one type of hardening of the arteries, Dr. Meyer Texon of the New York University Post-Graduate Medical School said in the American Medical Association's March Archives of Internal Medicine.

In addition, it may help to explain sudden heart attack deaths following exertion or emotional disturbances, since hemodynamics—the technical term for the motion of blood—plays a role in the development of coronary occlusion and coronary thrombosis.

According to Bernoulli's theorem, fluid in motion possess energy because of its velocity and its pressure. When velocity increases and static pressure decreases—as on the inside of a curved tube—a suction effect is created. This principle of suction has been applied to the airfoil and to many hydraulic devices.

In the circulatory system, the suction effect is produced in abrupt curves, at points of branching, or at points where vessels join. The suction effect tends to pull the inside of the vessel walls toward the center of the vessel. This causes the inner layer of the wall to thicken at this point. Continued exposure to suction stimulates further changes and the typical atherosclerotic plaque develops.

Eventually the inner layer of the plaque becomes detached, which produces a raw or ulcerated surface to which blood elements become attached to form a thrombus, or clot. This eventually occludes, or clogs, the vessel. Sometimes these ulcerated spots tear and allow hemorrhaging of the vessel.

When stress, exertion or emotional disturbances cause sudden increases in heart beat and blood velocity, acute complications may occur in vessels already damaged by the normal motion of the blood. A thrombus may suddenly form or an ulcerated surface may tear and allow hemorrhaging.

This may be what happens in some sudden deaths due to "acute coronary disease with antecedent progressive coronary atherosclerosis," or in cases of acute coronary occlusion with myocardial infarction (a type of heart attack) which follow strenuous exertion or extreme emotional disturbances.

Editorial . . . .

The Nursing Shortage

IN SOME WAYS the shortage of nurses is reminiscent of Mark Twain's remark about the weather—"Everyone talks about it but no one does anything about it." This, of course, is not strictly true for many efforts have been made to better conditions but the results to date have not been too encouraging.

The situation is nation-wide and with the possible exception of Norfolk, every city in Virginia is said to have an acute lack of nurses. It is reported that the presence of navy wives who are also nurses alleviates to some degree the nursing shortage in that port city.

One disconcerting aspect of the problem has been the impression conveyed from time to time, that interested organizations have used the lack of nurses as a means to obtain concessions which in turn has increased, rather than lessened, the shortage.

Be that as it may, the attrition that marriage and secretarial work in physician's offices alone has brought about has resulted in nurses practicing their profession an average of only three years following graduation. The increasing scope of military, industrial and public health nursing also has diverted many nurses from private duty or institutional work. Civilian hospitals in cities in which Veteran Administration facilities are located find the pay scale at these institutions difficult to match.

In an effort to interest more girls in nursing as a career, a Conference Planning Sub-Committee has been appointed to work with the Committee on Nursing of the Virginia Council on Health and Medical Care. This group will endeavor to dramatize the need for nurses and the advantages of nursing training. Two meetings will be held in Richmond on Monday, May 13, in an effort to further this end. A day meeting is scheduled for hospital and professional personnel to discuss the more technical aspects of nurse shortage and steps which may be taken to offset this situation. An evening program designed to attract the public will be held in the evening when the advantages of nursing as a career will be emphasized.

May the twelfth through the eighteenth has been designated as National Hospital Week so it is most appropriate that the thirteenth of May should be devoted to the greatest of hospital needs.

It is hoped that the medical profession and the public generally will be well represented at these meetings for the need is great and the shortage of nurses is increasing.

H.J.W.

News . .

Calendar of Coming Events

Virginia Academy of General Practice—7th Annual Scientific Assembly—Hotel Roanoke, Roanoke, Virginia—May 24-26.

American Goiter Association—Hotel Statler, New York City, New York, May 28-30.

American College of Chest Physicians—Annual Meeting—Hotel Commodore, New York City—May 29-June 2.

American Medical Association—Annual Meeting—Waldorf-Astoria Hotel—New York City, New York—June 3-7.

The Medical Society of Virginia—Annual Meeting—Hotel Shoreham, Washington, D. C.—October 27-30.

New Members.

Since the list published in the April issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

William Maury Bangel, M.D., Newport News
Hiram Wilson Davis. M.D., Richmond
John L. Fairly, Jr., M.D., Richmond
Joseph Humphries Magee, M.D., Charlottesville
James Dunn Mason, Jr., M.D., Petersburg
Henry Page Mauck, Jr., M.D., Richmond
Peter Joachim Mette, M.D., Grundy
Henry Page Royster, M.D., Richmond
Antonio Pietro Tirone, M.D., Richmond
George Alexander Wermer, M.D., Gretna
Edward S. White, M.D., Bloxom



Meritorious Service Award.

Dr. J. Treacy O'Hanlan, Waynesboro, was recently honored by the President's Committee on the Employment of the Physically Handicapped with a special citation for his work in this field. In a ceremony attended by a number of state and local dignitaries, an award for meritorious service was presented during a meeting of the Waynesboro Rotary Club on March 7.

From left to right above are Mr. A. C. Arey, Local Superintendent, Virginia Employment Service; Mr. John Garber, Area Supervisor, Vocational Rehabilitation, Shenandoah Valley Area; Dr. Rachael Weems, Director of Physical Medicine, Woodrow Wilson Rehabilitation Center; Dr. John Stirewalt, Physician in Charge, Woodrow Wilson Rehabilitation Center; Mrs. J. Treacy O'Hanlan; Mr. John T. McChesney, President, Rotary Club of Waynesboro; Dr. O'Hanlan; Mr. George T. Kings-

ley, Governor's Committee on Employment of the Physically Handicapped of the Virginia State Employment Service; Mr. Sam Hall, local member of the Committee on Employment of the Handicapped Dr. Harold W. Miller, Councillor for the 7th District, The Medical Society of Virginia and Representative of Dr. Hagood; Mr. Frank O. Birdsall, Supervisor of Woodrow Wilson Rehabilitation Center.

Dr. Mabry Honored.

The Newport News-Warwick Medical Society Woman's Auxiliary honored Dr. J. Hughes Mabry on "Doctor's Day" on March 30th. The 77-year old physician was selected for the honor because of his outstanding service through the 56 years of his medical practice. He has treated some 250,000 patients and delivered several thousand Peninsula babies, and still sees patients in offices at his home in Newport News.

He was honor guest at a party the wives gave for doctors of the two-city group at the Poquoson cottage of Dr. and Mrs. T. C. Lawford.

Dr. Mary Elizabeth Johnston,

Tazewell, has been named to the Board of Directors of the American Academy of General Practice.

Annual Medical Golf Tournament.

The American Medical Golfing Association will hold its Forty-First Tournament, June 3, at the Westchester Country Club, Rye, New York. As in the past few years, eighteen hole competition will determine championships and will be the basis for awarding prizes.

Tournament play will start at 8:30 A.M. Players may tee-off up to 2:00 P.M. Buffet luncheon, banquet, prizes and green fees are included in the cost of the day's activities. All male members of the American Medical Association are eligible to participate in the tournament. Players should present verification of their home club handicap, signed by their club secretary, otherwise handicap is set by the A.M.G.A. Handicap Committee.

Notice of further details and advance registration card may be secured from Bob Elwell, 3101 Collingwood Blvd., Toledo 10, Ohio.

Dr. Walter B. Martin,

Norfolk, has been appointed as an Honorary Trustee of The Foundation of the Student American Medical Association.

Conference on Nursing Education.



Featured speakers during the Conference on Nursing Education, sponsored by The Medical Society of Virginia on February 19, were Miss Mabel Montgomery, Secretary-Treasurer of the State Board of Nurse Examiners, and Dr. Thomas Hale, Jr., Director of Albany Hospital, Albany, New York (2nd from right). On the left is Dr. James D. Hagood, President of The Medical Society of Virginia, who presided and on the right is Dr. John R. Mapp, Nassawadox, who supervised arrangements.

Dr. Stafford Honored.

Dr. Frank B. Stafford has received the Virginia Tuberculosis Association's Douglas Southall Freeman award for his thirty-five years of service at Blue Ridge Sanatorium in Charlottesville.

Virginia Pediatric Society.

At the annual meeting of this Society held in Williamsburg, March 22-23, Dr. Armistead P. Booker, Charlottesville, was elected president. Dr. Harry D. Cox, Portsmouth, vice-president, and Dr. Robert H. Cox, Jr., Lynchburg, secretary-treasurer.

Dr. Charles P. Cake,

Arlington, has been elected president of the Virginia Tuberculosis Association.

Dr. Paul Halter,

Alexandria, has been installed for a second term as President of the Mineralogical Society of the District of Columbia.

American College of Obstetricians and Gynecologists.

District IV of the College will meet in Washington, D. C., October 4-5, 1957. The states comprising this District are: District of Columbia, Florida,

Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia, Puerto Rico and the Virgin Islands. Physicians of these states are invited to attend the scientific and social functions of this meeting. Additional information may be obtained by writing Frank R. Lock, M.D., Bowman Gray School of Medicine, Winston-Salem, N. C., District Chairman, or Robert H. Barter, M.D., 901-23rd St., N. W., Washington, D. C., Chairman of the Program.

Dr. Artie L. Sturgeon

Has joined the staff of Saint Albans Psychiatric Hospital, Radford. He has recently been Staff Clinical Psychologist at the Knoxville (Tenn.) Mental Health Center. Dr. Sturgeon is a native of Evansville, Indiana, and a graduate in medicine from the University of Texas. He is married and has two children.

Dr. Southgate Leigh, Jr.,

Norfolk, was guest speaker at the annual meeting of the Georgia Medical Association, April 30th. He was sponsored by the Georgia Industrial Surgeon's Association and addressed the joint Sections on Surgery and Industrial Surgery, his topic being "Hand Injuries—Fundamental Principles of Conservative Treatment".

Dr. M. J. Hoover, Jr.,

Department of Orthopedics, Medical College of Virginia, addressed the Staff of the Northampton-Accomack Memorial Hospital at their regular Continuation Education program on April 3rd. His subject was The Internal Fixation of Fractures.

Rehabilitation Center for Handicapped Children.

The University of Virginia Rehabilitation Center for Handicapped Children is scheduled for completion in June. This is located on the site of the old Rucker Home, approximately two miles west of the hospital on Route 250 and will be a 30-bed multi-disability unit to provide rehabilitation and convalescent services to children referred through the University of Virginia Medical Center. It is expected the Center will be equipped and staffed for operation during the summer months and ready to receive patients in September.

The Rehabilitation Center has a clinical area consisting of treatment facilities, a large physical medicine unit, an occupational therapy section, an ample dining room and recreation room, consultation and administrative offices, a schoolroom, and accommodations for a resident physician, matron and custodian. It will be completely air conditioned.

Virginia Association of Medical Assistants

The second annual meeting of the Virginia Association of Medical Assistants was held in Richmond, March 9-10. Mr. Robert I. Howard, Executive Secretary of The Medical Society of Virginia gave the welcome address. The following officers were elected: president, Mrs. W. G. Dove, Lynchburg, vice-president, Mrs. Elva Spain, Petersburg; secretary, Miss Catherine Whittle, Petersburg; treasurer, Mrs. J. R. Reynolds, Tazewell. The chairmen of the following committees are: finance, Mrs. Ruth Britts, Charlottesville; membership, Mrs. N. M. Moorefield, Lynchburg; publicity, Mrs. E. S. Carwile, Lynchburg; nominating, Miss Mildred Phippen, Richmond.

Any person employed by a medical doctor is eligible for membership and may contact either the president or Mrs. Moorefield.

Schering Releases Arthritis Film

A new 16 mm. color motion picture on the uses of steroids in the treatment of rheumatoid arthritis has been released for showing to professional groups by the research division of Schering Corporation.

The film reviews the chemistry, physiology and clinical application of the new "Meti" steroid hormones in rheumatoid arthritis and other collagen diseases. It presents the most commonly accepted theories of adrenal corticosteroid therapy and reflects the current knowledge of the subject.

The 25 minute film, which is the fourth in Schering's series on hormone therapy and the endocrines, was produced by the company's Clinical Research Division and Biochemical Research Department. Three leading rheumatologists and endocrinologists cooperated: Dr. Joseph Eidelsberg, Associate Professor of Clinical Medicine at New York University's Post Graduate Medical School and Chief of the Endocrine Clinic at University Hospital, New York, Dr. Abraham Kolodin, Senior Attending in Medicine at Mountainside Hospital, Montclair, N. J. and Dr. Evelyn Merrick, Rheumatologist at the Orange Medical Center, Orange, N. J.

The film is available to medical and allied professional groups on loan without charge. "'Meti' Steroids in Rheumatoid Arthritis" and other Schering films may be obtained by writing to The Audio-Visual Department, Schering Corporation, Bloomfield, N. J.

Obituaries . . . .

Dr. Thomas Edmond Hughes,

Delaplane, was killed April 2nd in a two-truck crash near his home. He was seventy-three years of age and a graduate in medicine of the University of Virginia in 1910. Dr. Hughes was an ear, nose and throat specialist and was chief of that department at St. Luke's Hospital in Richmond for about twenty-five years. He resigned in 1952 and moved to Fauquier County, with his office in Front Royal. Dr. Hughes had been a member of The Medical Society of Virginia since 1919.

His wife, a sister and four brothers survive him.

Dr. Edwin Clinton Bryce,

Well-known Richmond physician, died April 15th, at the age of seventy-two. He was a graduate in medicine of the former University College of Medicine, Richmond, in 1910, having previously graduated in pharmacy from the same school. Dr. Bryce was in general practice until 1918 when he took special training at the Brooklyn Eye and Ear Hospital. Since then he had specialized in diseases of the eye, ear, nose and throat. Dr. Bryce had been a member of The Medical Society of Virginia for forty-five years.

His wife, a daughter and a foster son survive him.

Dr. Fred Jacob Wampler,

Bridgewater, died April 6th, having been in ill health for the past year. He was seventy-four years of age and a graduate of the University of Chicago Medical School in 1913. Dr. Wampler served as a medical missionary in China for the Church of the Brethren, returning to the United States in 1926 when he was with the Public Health Service in the Eastern Shore area. In 1928, he became professor of preventive medicine and director of the outpatient clinic at the Medical College of Virginia. He also served as state medical director of the WPA program and chairman of the Richmond Health Council. In 1944, Dr. Wampler became health director of a Baltimore steel firm and in 1946 was health officer for the Page-Warren-Shenandoah health district. In 1954 while serving as health officer of Granville County, N. C., he was presented the Reynolds Medal for outstanding achievement in the field of public health in North Carolina. Dr. Wampler has been a member of The Medical Society of Virginia for twenty-six years.

His wife, a son, a stepson, and a stepdaughter survive him.

Dr. William Edwin Dickerson,

Prominent eye, ear, nose and throat specialist of Danville, died March 28th after an illness of several days. He was fifty-nine years of age and a graduate of the Medical College of Virginia in 1923. Dr. Dickerson practiced for a short time in Princeton and Welch, West Virginia, before locating in Danville. He was a veteran of World War II. Dr. Dickerson had been a member of The Medical Society of Virginia for twenty-two years.

His wife and a son survive him.

Dr. Lawrence Bernard Kelleher,

Richmond, died March 30th, at the age of fifty-four. He graduated from the Medical College of Virginia in 1926. Dr. Kelleher was prominent in fraternal and charitable activities. He was a Fourth Degree Knight of Columbus, a member of the West End Catholic Men's Association and St. Mary's Beneficial and Social Union. He had been a member of The Medical Society of Virginia since 1935.

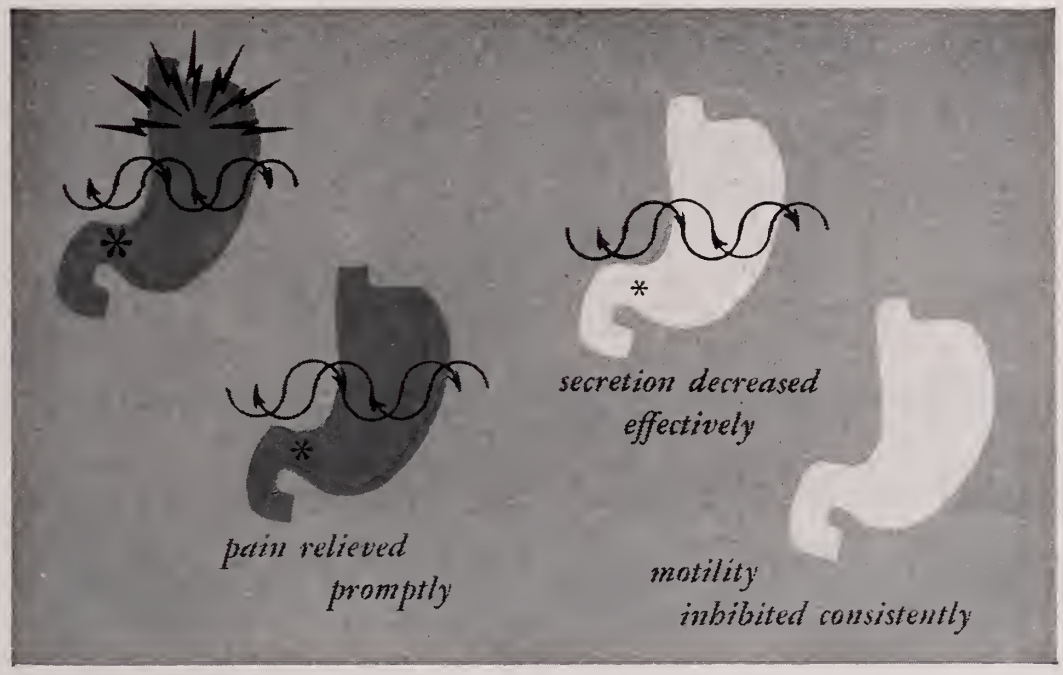
Dr. Kelleher is survived by four daughters.

Dr. Richard Phillips Bell.

The Editors of the Monthly regret the error in the notice of the death of Dr. Bell in the March issue. It was stated that he was a graduate of the former University College of Medicine, Richmond, in 1902. Dr. Bell was a graduate of the Medical School of the University of Virginia, class of 1905.

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*Lichstein, J.; Morehouse, M. G., and Osmon, K. L.: Pro-Banthine in the Treatment of Peptic Ulcer. A Clinical Evaluation with Gastric Secretory, Motility and Gastroscopic Studies. Report of 60 cases, Am. J. M. Sc. *232*:156 (Aug.) 1956.

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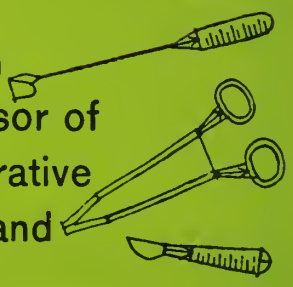
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In order to satisfy these extremely high nutritional requirements, "protective" foods supplying liberal amounts of protein, vitamins, and minerals should predominate in adolescent diets.[3] Such foods include meat, poultry, fish, milk, eggs, vegetables and fruits, and whole-grain or enriched cereals and enriched bread. Accessory foods commonly eaten by adolescents to satisfy emotional needs may provide energy, but are commonly responsible for obesity and should not take the place of the "protective" foods.

Meat contributes much toward making the daily meals of adolescents appetizing, ample, and satisfying as well as adequate in protein, B vitamins, iron, phosphorus, potassium, and magnesium. Its complete protein functions in all physiologic mechanisms utilizing protein—tissue growth and replacement, fabrication of enzymes, hormones, and antibodies, and maintenance of the body's fluid balance. Its B vitamins and minerals take part in many processes of intermediate metabolism important in body development.

1. Toverud, K. U.; Stearns, G., and Macy, I. G.: Maternal Nutrition and Child Health. An Interpretative Review, Washington, D.C., National Research Council, National Academy of Sciences, Bull. No. 123, 1950, p. 115.
2. Proudfit, F. T., and Robinson, C. H.: Nutrition and Diet Therapy, ed. 11, New York, The Macmillan Company, 1955, p. 271.
3. Martin, E. A.: Roberts' Nutrition Work with Children, Chicago, The University of Chicago Press, 1954, pp. 231-236

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Aspirin you can prescribe.

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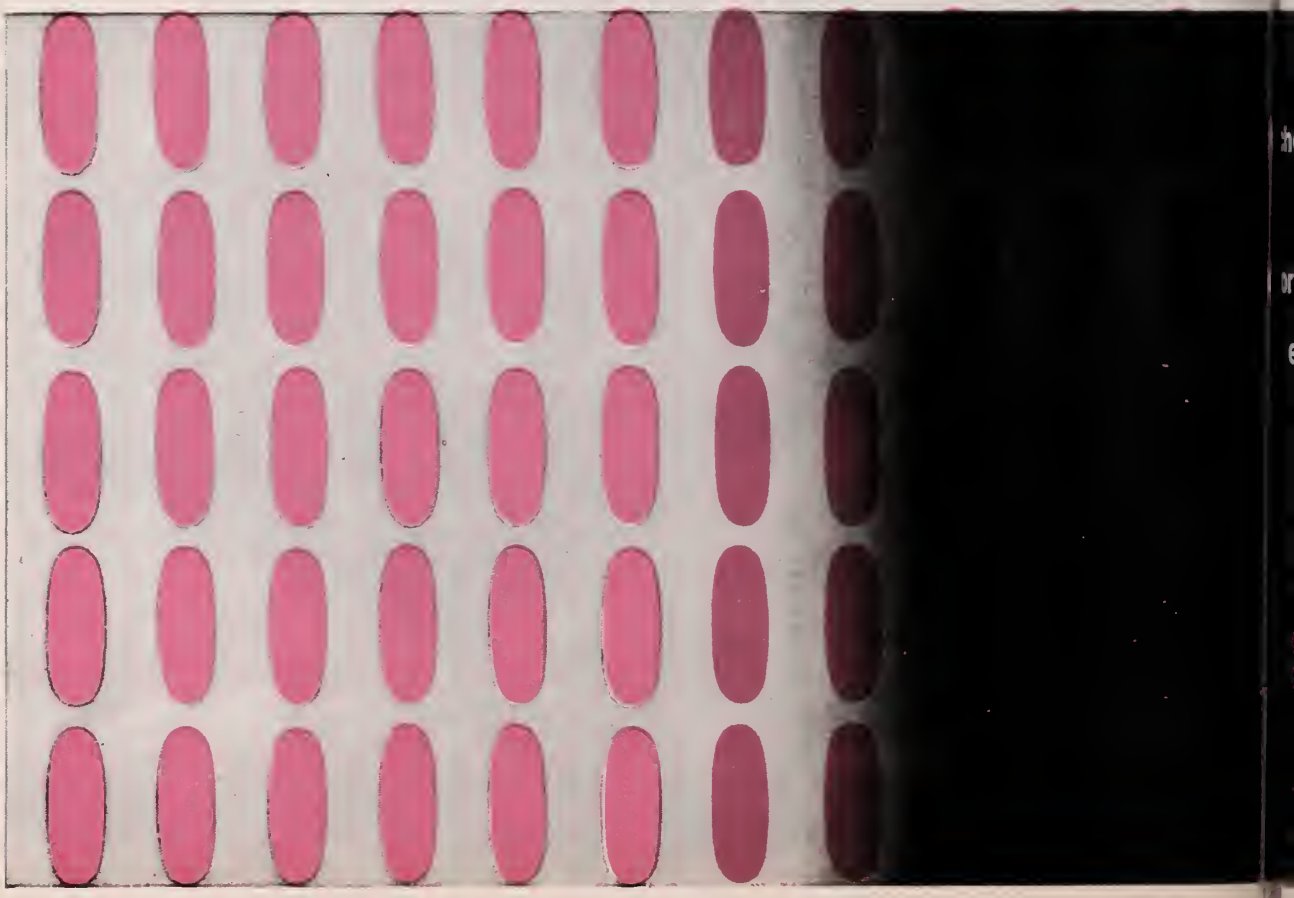
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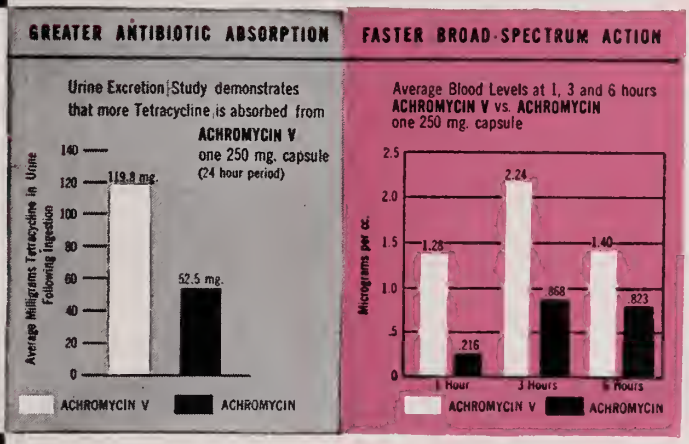


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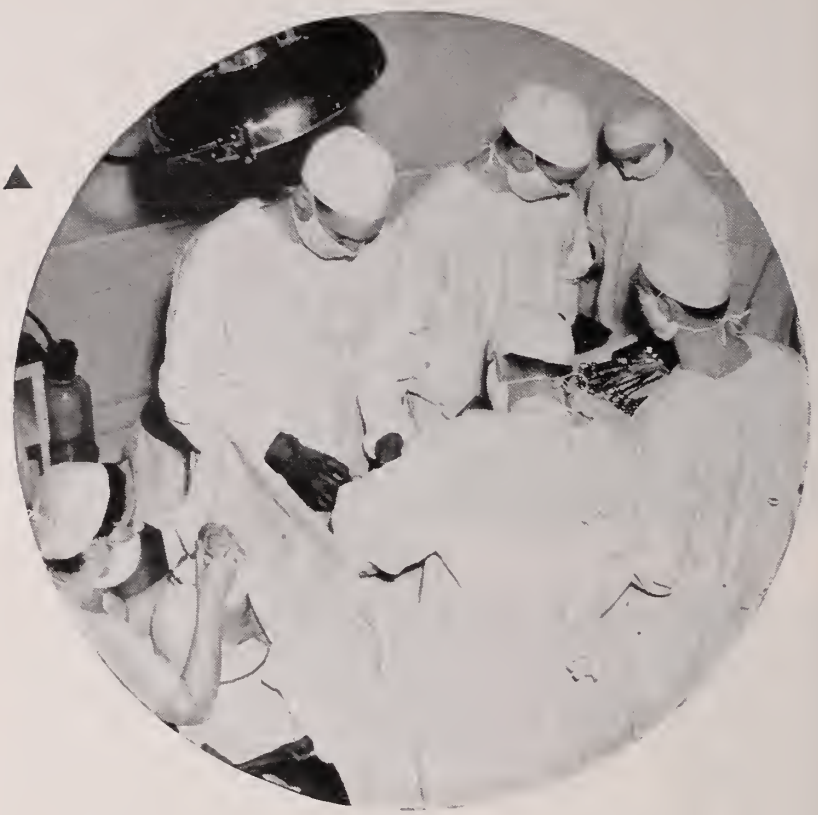
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In co-operation with
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The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

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for senile psychoses

an ideal cerebral tonic and stimulant for the aged

NICOZOL relieves mental confusion and deterioration, mild memory defects and abnormal behavior patterns in the aged.

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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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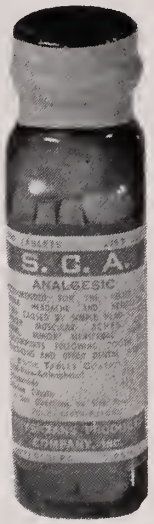
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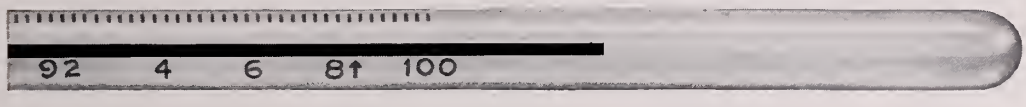
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Failure to recognize this limitation of enzyme tests may result in incorrect insulin dosage,[2] and may lead to diabetic complications.

(1) King, J. W., and Hainline, A., Jr.: Commercial Glucose Oxidase Preparations for the Detection of Glucose in Urine, Cleveland Clin. Quart. **23**:212, 1956. (2) Leonards, J. R.: Evaluation of Enzyme Tests for Urinary Glucose, J.A.M.A. **163**:260 (Jan. 26) 1957.

reliable readings throughout the critical range—
does not omit ¾% (++) and 1% (+++)

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a 15 year "standard" in urine-sugar testing

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for immediate control of nausea and vomiting when oral administration is not feasible

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SANDRIL c PYRONIL

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About 50 percent of all patients experience this annoying side-effect. 'Sandril' c 'Pyronil' relieves 75 percent of those affected.

TABLETS of 0.25 mg. 'Sandril' plus 7.5 mg. 'Pyronil.'

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The Medical Society of Virginia
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JUNE, 1957

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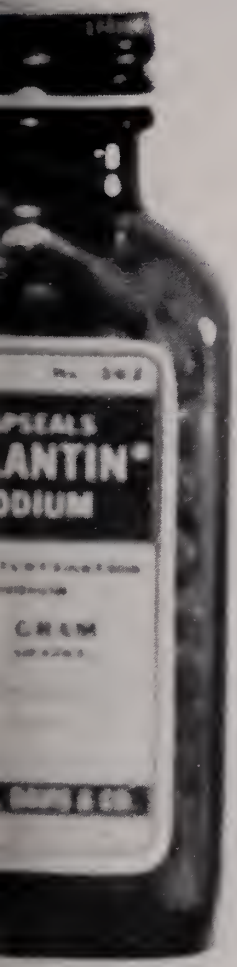
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CELONTIN*

(methsuximide, Parke-Davis)

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1. Zimmerman, F. T., and Burgemeister, B.: *Arch. Neurol. & Psychiat.* 72:720, 1954.
2. Zimmerman, F. T., and Burgemeister, B.: *J.A.M.A.* 157:1194, 1955.
3. Zimmerman, F. T.: *Arch. Neurol. & Psychiat.* 76:65, 1956.

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of PEPTIC ULCER

Gastro-Intestinal
Irritability and Tension

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Potent ANTISECRETORY • ANTICHOLINERGIC • SEDATIVE

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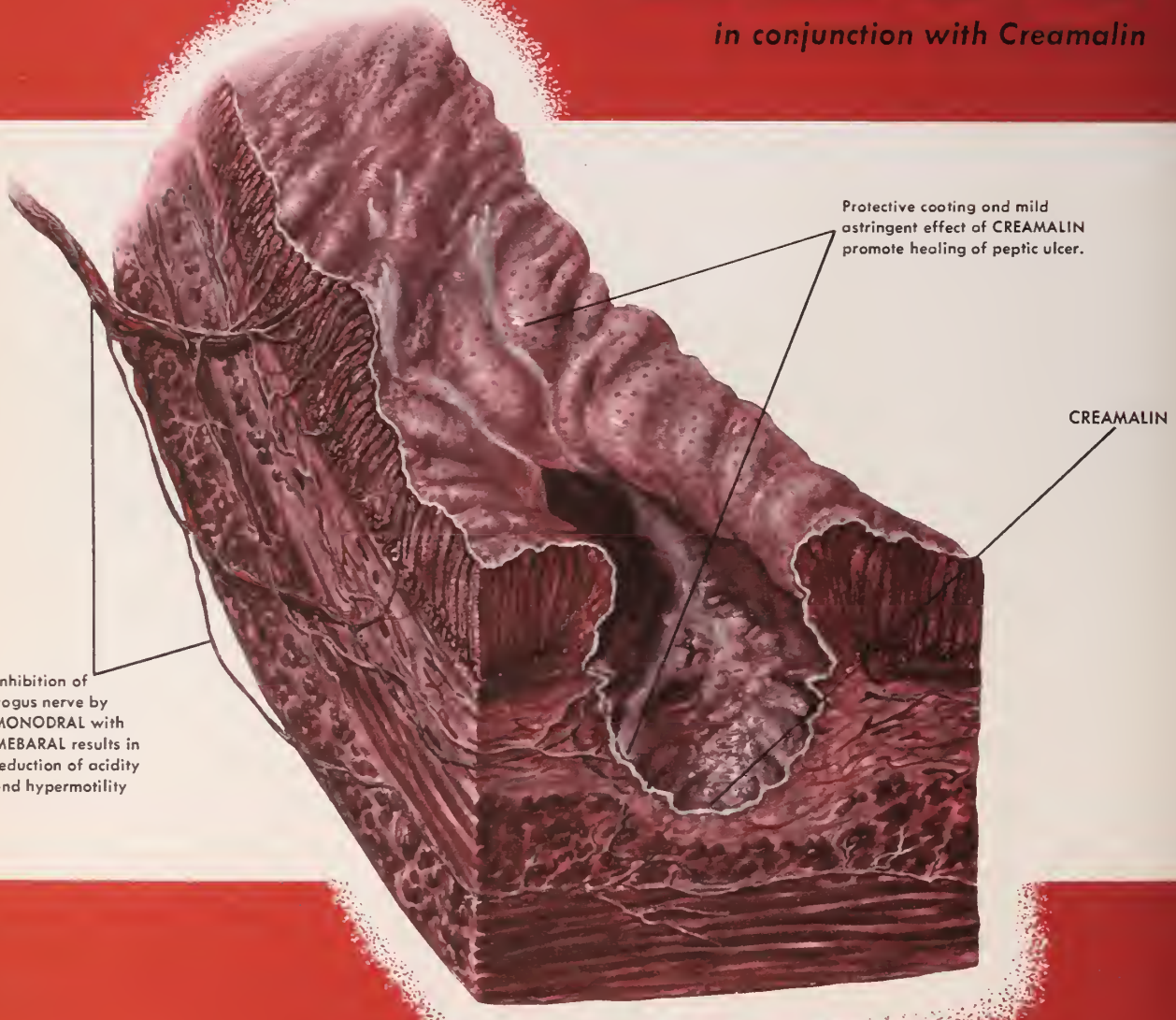
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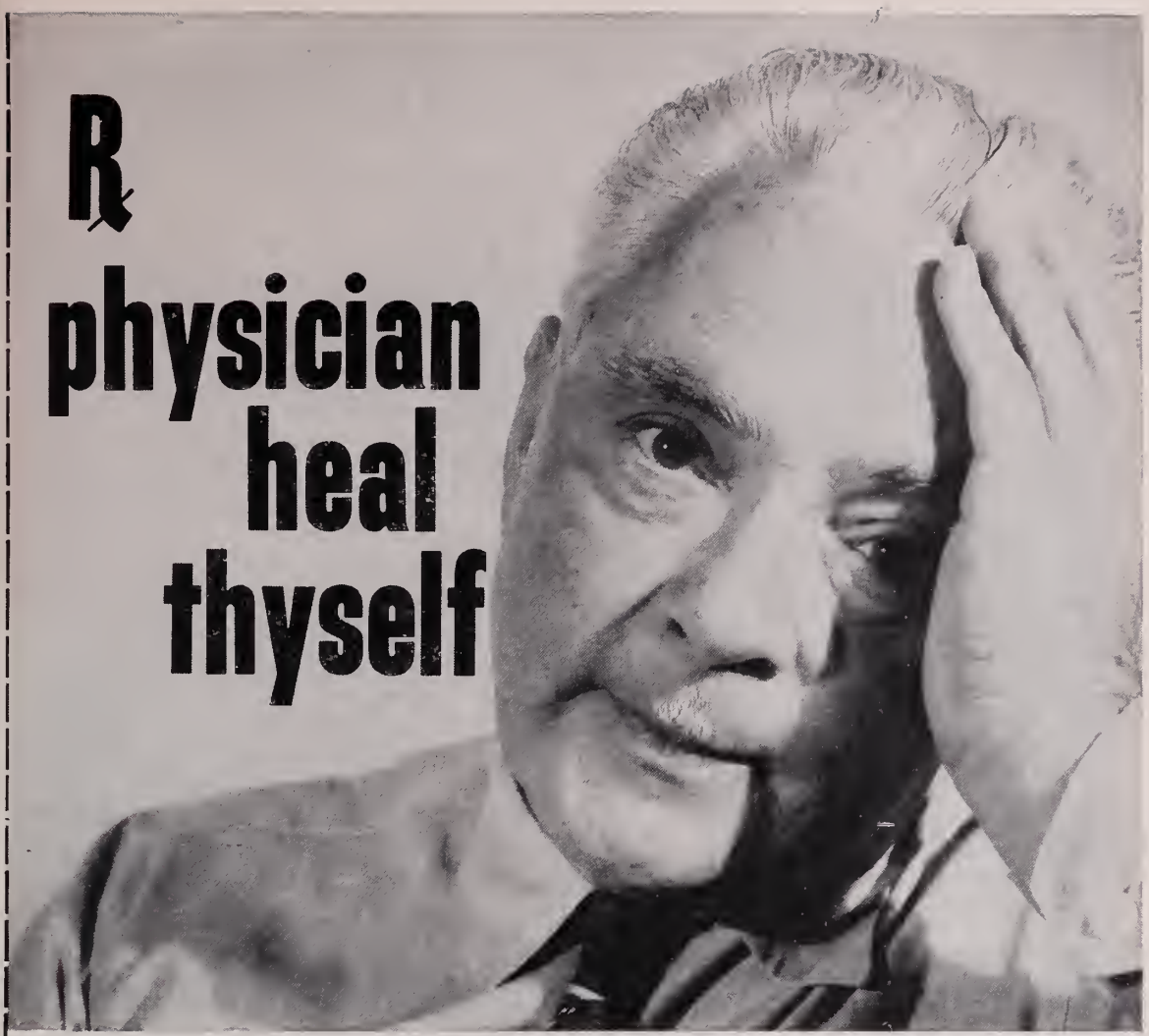
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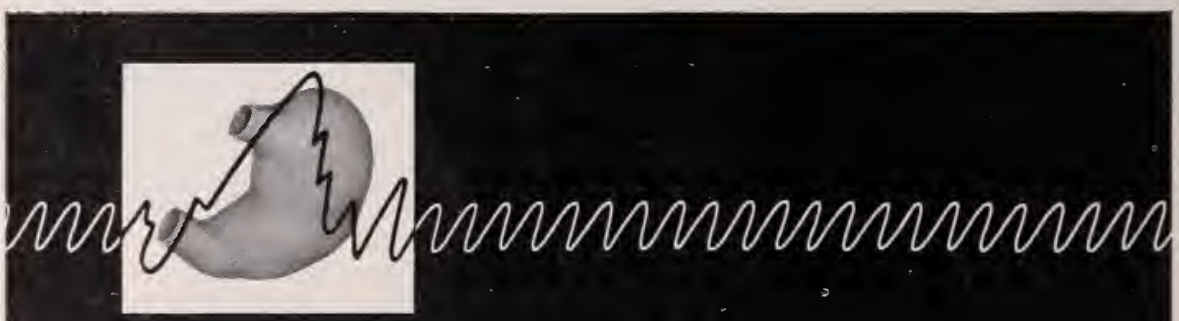
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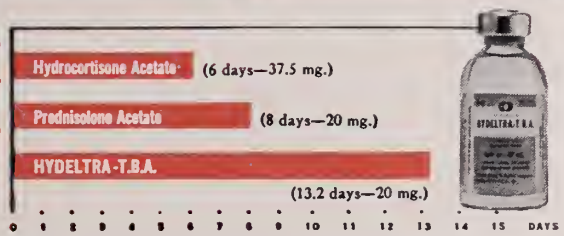
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Phenobarbital	¼ gr.
Warning—May be habit forming.	
Acetyl-para-aminophenol	2½ gr.
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BIBLIOGRAPHY

*Goodman, L., and Gilman, A.: *The Pharacological Basis of Therapeutics*, 1941, p. 244.

**Beckman, Harry: *Pharmacology in Clinical Practice*, 1952, p. 465.

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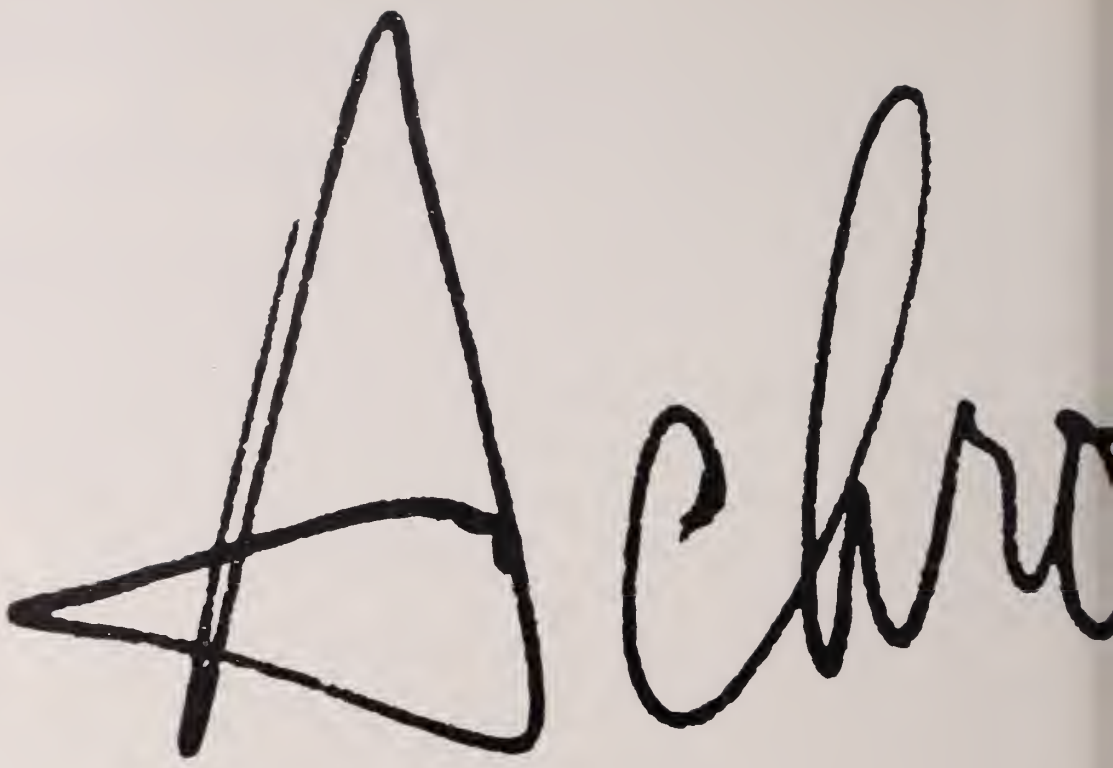
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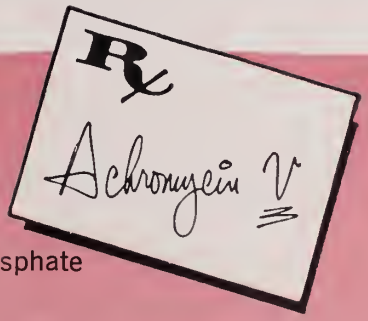
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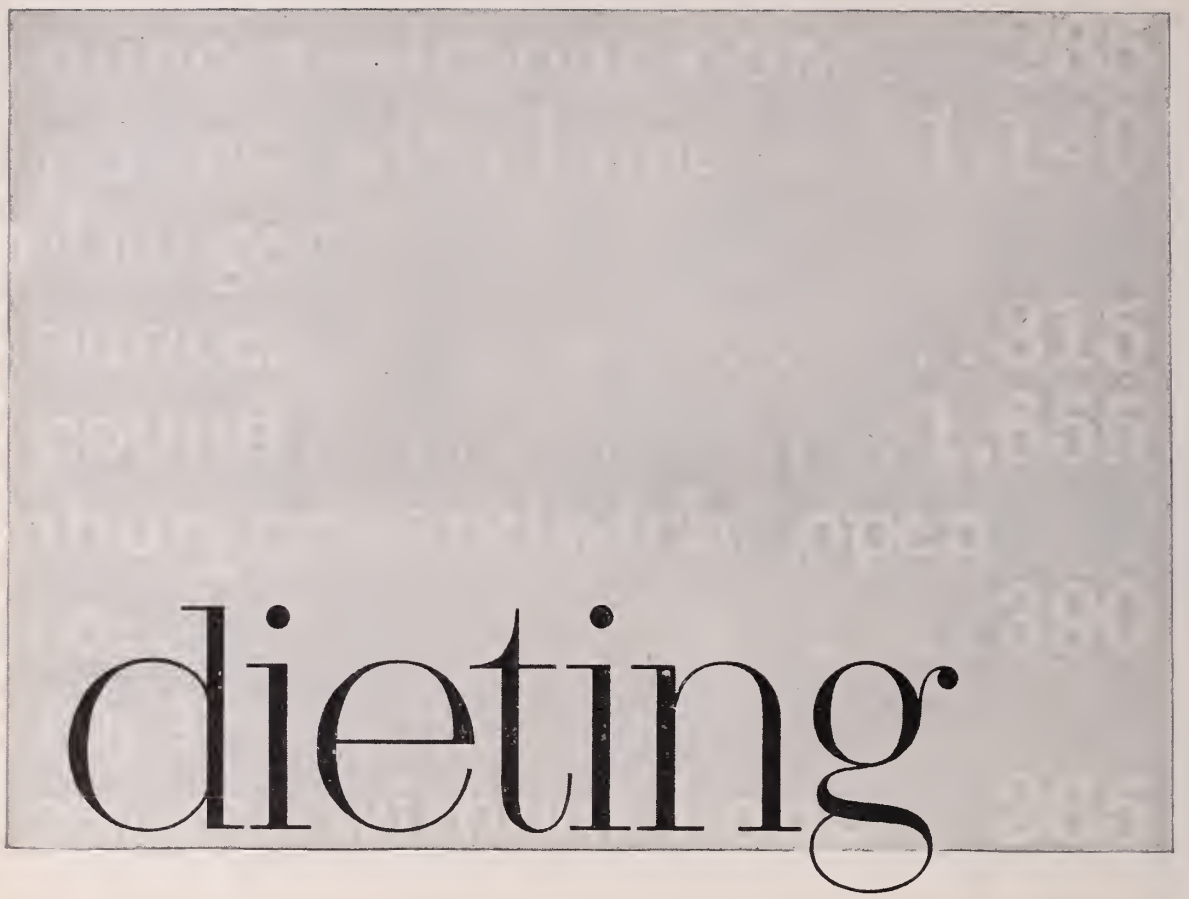
CAPSULES—Each capsule (pink) contains tetracycline equivalent to 250 mg. of tetracycline HCl, phosphate-buffered. Bottles of 16 and 100 capsules.

SYRUP—Each teaspoonful (5 cc.) of orange-flavored syrup contains 125 mg. of tetracycline HCl activity, phosphate-buffered. Bottles of 2 and 16 fl. oz.

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A reducing regimen that is dependent on diet alone is frequently complicated by psychic side effects—irritability, psychogenic weakness and fatigue.

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Each 'Dexamyl' Tablet or teaspoonful (5 cc.) of the Elixir supplies: 'Dexedrine' (dextro-amphetamine sulfate, S.K.F.), 5 mg.; amobarbital, ½ gr.

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- to correct many common anemias
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Thiamine mononitrate	1.0 mg.
Riboflavin	1.0 mg.
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Pantothenic acid (Panthenol)	1.5 mg.
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"Mediatric" supplies estrogen and androgen in small amounts to exert a favorable influence on bone and protein metabolism,[1] restore muscle tone and coordination,[2] and increase the tensile strength of the skin.[3] The two steroids appear to have an additive metabolic effect, while their opposing action on sex-linked tissue minimizes the incidence of untoward reactions.

Dietary supplements, including essential B vitamins and ascorbic acid, ensure adequate nutrition, prevent moderate anemias, and maintain efficient enzyme systems. The mood elevating effect of a mild antidepressant helps restore emotional stability and increases mental alertness.

Recommended dosages: Male — 1 tablet or 1 capsule (or 3 teaspoonfuls) daily, or as required. Female — 1 tablet or 1 capsule (or 3 teaspoonfuls) daily, or as required, taken in 21 day courses with a rest period of one week between courses.

Bibliography on request.

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Each capsule or tablet contains:

Conjugated estrogens equine ("Premarin"®)	0.25 mg.
Methyltestosterone	2.5 mg.
Vitamin C (ascorbic acid)	50.0 mg.
Thiamine mononitrate (B_1)	5.0 mg.
Vitamin B_{12} with intrinsic factor concentrate	1/6 U.S.P. Unit
Folic acid U.S.P.	0.33 mg.
Ferrous sulfate exsic.	60.0 mg.
Brewers' yeast (specially processed)	200.0 mg.
d-Desoxyephedrine HCl	1.0 mg.

Tablets—No. 752—bottles of 100 and 1,000.
Capsules—No. 252—bottles of 30, 100, and 1,000.

"Mediatric" Liquid

Each 15 cc. (3 teaspoonfuls) contains:

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Methyltestosterone	2.5 mg.
Thiamine HCl (B_1)	5.0 mg.
Vitamin B_{12}	1.5 mcg.
Folic acid U.S.P.	0.33 mg.
d-Desoxyephedrine HCl	1.0 mg.

Contains 15% alcohol
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presents the principal crystalline alkaloid of rauwolfia...reduces the "psychic magnitude" of everyday stresses in patients with mild or labile hypertension.[3] Bottles of 100, 500, and 1000 scored tablets: 0.1-mg. white, 0.25-mg. yellow, and 1.0-mg. orange tablets.

1. Wilkins, R. W.: Ann. New York Acad. Sc. 59:36, 1954. 2. Meilman, E.: Circulation 13:596, 1956. 3. Wolferth, C. C.: Pennsylvania M. J. 59:327, 1956.

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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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*Ferguson, J. T., and Linn, F. V. Z.: Antibiotic Med. & Clin. Therapy *3*:329, 1956.

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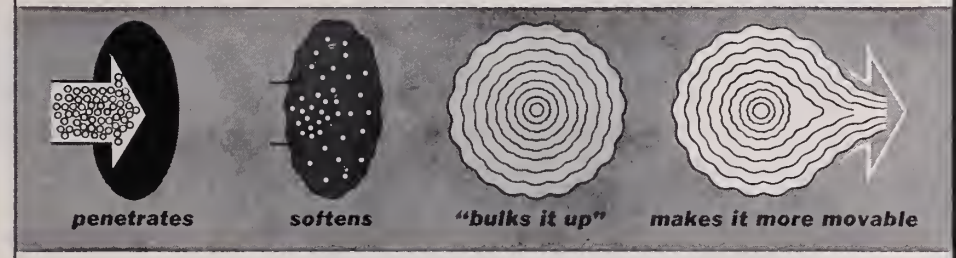
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1. Herrell, W. E., Erythromycin, Antibiotics Monographs, No. 1, p. 34, New York, Medical Encyclopedia Inc., 1955. **2.** Eastman, G., Cook, E. and Bunn, P., N. Y. State J. Med., 56:241, 1956. **3.** Solomon, S. and Johnston, B., Amer. J. Med. Sc., 230:660, 1955.

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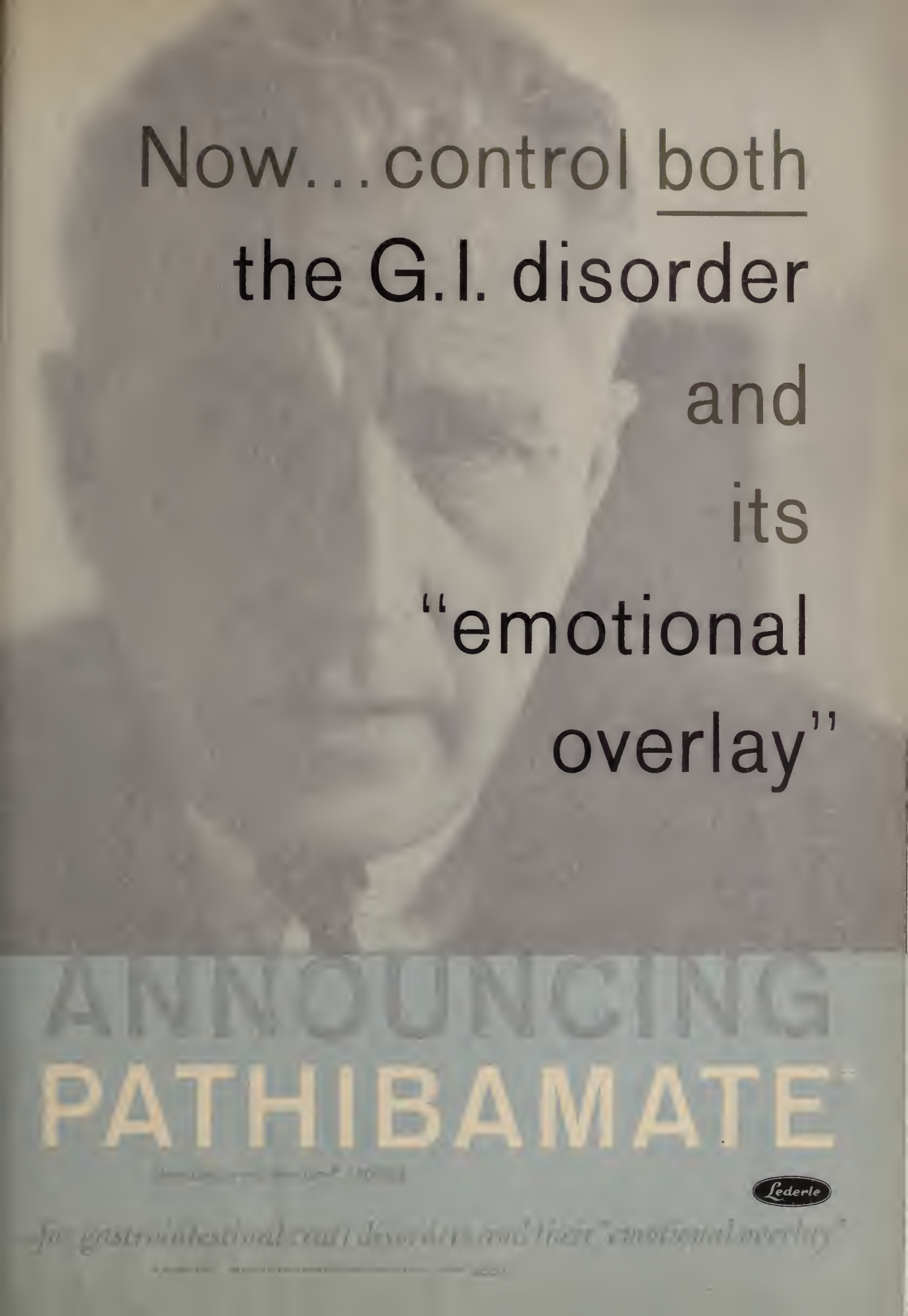
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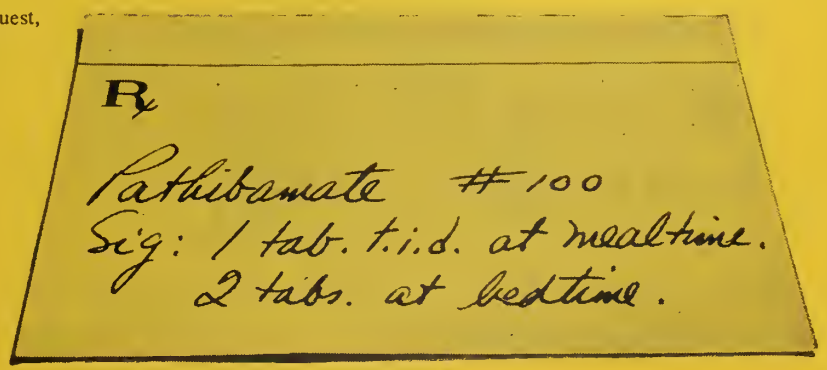
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ferences: 1. Borrus, J. C.: *M. Clin. North America,* press, 1957. 2. Gillette, H. E.: *Internat. Rec. Med. & G. P.* n. 169:453, 1956. 3. Pennington, V. M.: *J.A.M.A.,* press, 1957. 4. Cayer, D.: Prolonged Anticholinergic erapy of Duodenal Ulcer. Am. J. Dig. Dis. 1:301-309 ly) 1956. 5. McGlone, F. B.: Personal Communication to lerle Laboratories. 6. Texter, E. C., Jr.: Personal mmunication to Lederle Laboratories. 7. Bauer, H. G. l McGavack, T. H.: Personal Communication Lederle Laboratories.

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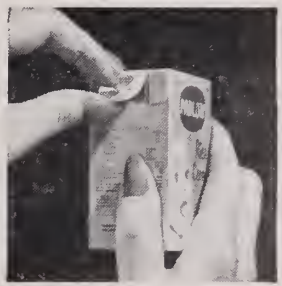
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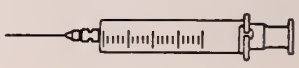


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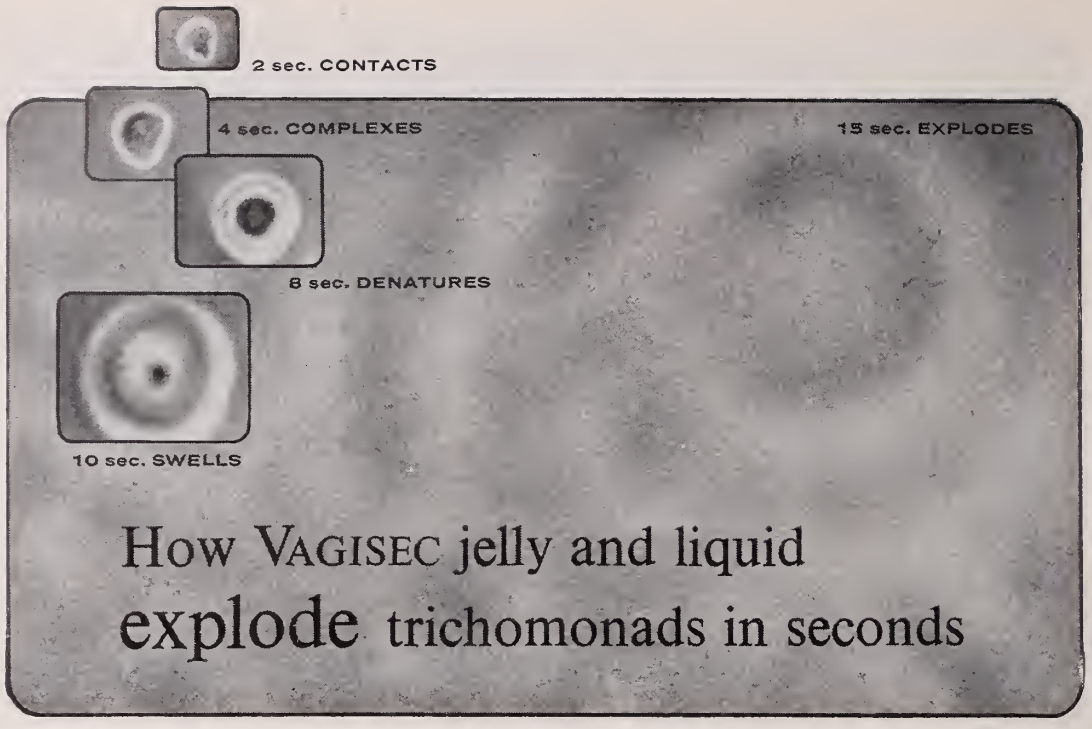
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References: 1. Decker, A., and Decker, W. H.: Practical Office Gynecology, Philadelphia, F. A. Davis Company, 1956. 2. McGoogan, L. S.: J. Michigan M. Soc. *55*:682 (June) 1956. 3. Davis, C. H. (Ed.): Gynecology and Obstetrics (revision), Hagerstown, W. F. Prior, 1955, vol. 3, chap. 7, pp. 23-33. 4. Davis, C. H.: West. J. Surg. *63*:53 (Feb.) 1955. 5. Davis, C. H.: J.A.M.A. *157*:126 (Jan. 8) 1955. 6. Molomut, N., Port Washington, N. Y.: Personal communication (Jan.) 1957. 7. Draper, J. W.: Internat. Rec. Med. *168*:563 (Sept). 1955. 8. Feo, L. G., et al.: J. Urol. *75*:711 (Apr.) 1956.

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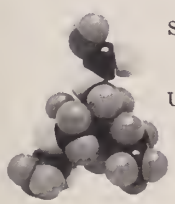
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Keyes, B. L.: Pennsylvania M. J. 60:177, Feb. 1957.

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Sokoloff, O. J.: A.M.A. Arch. Dermat. & Syph. 74:393, Oct. 1956.

4 "It ['Miltown'] . . . does not cloud the sensorium, and has a helpful somnifacient effect devoid of 'hangover'."

Kessler, L. N. and Barnard, R. D.: M. Times 84:431, April 1956.

5 "In anxiety and tension states, meprobamate relaxes without dulling cortical function to the same extent as the commonly-used barbiturates."

Rindskopf, W., Ravreby, M., Gutenkauf, C. and Sands, S. L.: J. Iowa M. Soc. 47:57, Feb. 1957.



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The Virginia
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June, 1957
Vol. 84, No. 6
Whole No. 1260

Guest Editorial....

The Current Status of Surgery for Cardiovascular Disease

ADVANCES IN CORRECTIVE surgery for many cardiovascular deformities have been so rapid since World War II that it is necessary to pause from time to time for an objective appraisal of the status of this field. The use of hypothermia with venous inflow occlusion and more recently, the application of the extracorporeal heart-lung apparatus have made possible the correction of intracardiac malformations for which only palliative procedures were heretofore used.

Corrective operations have long been carried out for patent ductus arteriosus with excellent results and a mortality rate of 1 to 2 per cent. With certain exceptions, operation is recommended when the diagnosis is made. In the instance of intermittent or persistent reversal of blood flow, or a high degree of pulmonary hypertension, the mortality rate is increased.

The diagnosis of coarctation of the aorta is indication for operation in patients under 35 or 40 and in infants with cardiac failure which cannot be controlled by medical means. The narrowed segment of the aorta is excised and the cut ends are reanastomosed. If the segment is excessively long, insertion of a graft or prosthesis is necessary to re-establish continuity. In most instances, the blood pressure is reduced to normal or near normal and the mortality rate is less than 10 per cent.

The procedure of choice in most clinics for tetralogy of Fallot is a systemic pulmonary artery anastomosis rather than excision of the stenotic infundibulum or valvulotomy as advocated by Brock. More recently, an open heart technique employing an extracorporeal apparatus is being used for repair of the ventricular defect and correction of the stenotic area. The mortality rate is 25 to 50 per cent as opposed to 14 to 16 per cent using systemic pulmonary artery anastomosis. Although palliative, the shunt procedure affords a relatively normal life and will probably continue to be used until further experience with the open heart method reduces the mortality rate.

Operation for isolated valvular pulmonary stenosis is associated with a low mortality rate and affords excellent relief of symptoms. The Brock method of inserting a valvulotome through the right ventricular wall to incise the stenotic valve has been satisfactorily performed; however, hypothermia and venous inflow occlusion is being employed with increasing frequency to open the valve under direct vision because of frequent failure to lower the pressure gradient across the valve with the closed method.

Many satisfactory procedures have been developed for closure of the septum secundum type of interatrial septal defect. The Gross atrial well method, the Bailey atriosepto-

pexy and the Craaford-Sondergard circumclusion procedure are closed methods associated with a mortality rate usually under 5 per cent. It may be slighter higher with the direct visual method utilizing hypothermia and venous inflow occlusion and, at present, is significantly higher when an extracorporeal system is used. Operation is advised in most instances even though the patient may be asymptomatic. Partial closure might be helpful if there is considerable pulmonary hypertension, but when cyanosis is present, the risk greatly increases and there is considerable question that the defect can be closed.

Septum primum defects, usually producing severe symptoms early in life and often associated with a deformed mitral valve leaflet, generally necessitate repair using a pump oxygenator and the risk is greater than in the uncomplicated secundum defect. Atrioventricularis communis, a seemingly irreparable deformity, has been repaired on a few occasions by placing a plastic polyvinyl sponge in the opening between the auricles and the ventricles.

Congenital interventricular septal defects are being corrected with increasing frequency employing a heart-lung apparatus. In clinics where large numbers of these patients are undergoing operation, the mortality rate is 18 to 20 per cent. The technical procedure becomes less difficult when one employs, in addition to the bypass, a cardioplegic drug such as potassium citrate or acetylcholine. A compressed polyvinyl sponge prosthesis may be sutured to the edges to close large defects; in smaller defects, the edges may be approximated with sutures. One of the chief difficulties following repair of this defect is interference with the cardiac conducting system resulting in complete atrioventricular dissociation. This may be due to placement of sutures, or may develop as edema in the septum progresses. Some have thought that certain metabolic changes are also contributory. The operative risk is considerably increased if the preoperative pulmonary artery pressure approaches systemic pressure. Early operation should be carried out on these patients because of the development and progression of pulmonary vascular changes resulting in a high fixed pulmonary resistance which greatly increases the operative risk.

At present, definitive operation cannot be carried out when the ventricular septum is absent resulting in an anatomic single ventricle; however, sporadic attempts have been made to create a new septum. The chief consideration in these patients is control of high output failure during the first few months of life and prevention of pulmonary vascular changes later on. By placing a band about the main pulmonary artery and constricting it to about one-third of its original size, the pulmonary artery pressure and blood flow may be reduced to control cardiac failure and prevent the progression of pulmonary vascular changes. This palliative procedure may be used in most defects where there is a physiologic single ventricle and when definitive operation is unfeasible. At a later date, corrective surgery may be carried out.

Anomalies of venous return are not uncommon and are often associated with interatrial septal defects. When partially transposed, the veins can sometimes be rerouted from the right to the left side when the septal defect is closed. With complete anomalous drainage into the right auricle or one of its tributaries, the use of an extracorporeal circulation may be required to accomplish drainage into the left auricle and closure of the defect.

Transposition of the aorta and pulmonary artery, one of the most common malformations associated with cyanosis, still presents a great problem in treatment. Operations designed to retranspose the arteries or to completely transpose the venous return have met generally with poor success. Greatest benefits have been derived by increasing the communication between the two circulations usually by creating a large interauricular septal defect or by partially transposing the venous return.

In Eisenmenger's complex, the high interventricular septal defect may be closed

under direct vision except when cyanosis and a high fixed pulmonary resistance are present.

Tricuspid atresia can best be treated by anastomosing a systemic artery to the pulmonary arterial system. It seems unlikely that a corrective operation can be developed because of the absence of the tricuspid valve and a resulting rudimentary right ventricle.

Because of the frequent occurrence of acquired mitral stenosis and its associated disability, the development of a corrective procedure has been most rewarding. The finger is introduced into the left auricle and its commissures are torn; however, in 20 to 40 per cent, the valve is considerably thickened and deformed and the commissural fusion lines must be cut. Young people with minimal symptoms generally have excellent results but dramatic improvement has been observed in patients up to the age of 60. The mortality rate is less than 5 per cent unless the disease and associated signs and symptoms are far advanced.

Mitral insufficiency still presents a difficult problem in surgical management. The Davela-Glover procedure of constricting the annulus of the valve with a tape is probably the most successful to date and these surgeons report encouraging results. Attempts are being made to repair the valve using a cardiac bypass apparatus and ultimately this will probably be the procedure of choice.

Acquired aortic stenosis presents greater difficulties in management than does mitral stenosis. Transventricular or retrograde aortic operations are most commonly used. The use of the pump oxygenerator or hypothermia does not seem justified at this time when one considers how tremendously deformed and calcified the valve may be, and when satisfactory relief can be obtained in most instances with a closed procedure at lower risk. Open operation will be more justified when such a valve can be replaced by prosthesis or a valve of homologous or autogenous tissues. If congenital aortic stenosis is present one should use an open procedure so that the commissural fusion lines can be carefully divided, or a bicuspid valve can be created to produce a minimum of insufficiency. Cardiac failure and marked cardiac enlargement greatly enhance the surgical risk and early operation offers the greatest benefit.

Patients with aortic insufficiency who cannot be managed medically have been helped by insertion of the Hufnagel plastic valve immediately distal to the left subclavian artery. This has been lifesaving in many instances even though insufficiency still persists because approximately 30 per cent of the circulating blood volume is proximal to the valve. Considerable work on development of a valve placed proximal to the coronary ostia should facilitate a definitive procedure in the not-too-distant future.

Although significant progress has been made during the past few years, some of the greatest problems yet to be solved concern a more satisfactory understanding of factors associated with the use of extracorporeal circulation, methods of preventing heart block during these procedures, and the nature of, and better methods of controlling and treating ventricular fibrillation. Certainly one of the foremost challenges is the problem of atherosclerotic vascular disease and especially elucidation of methods for its prevention and treatment. A clearer understanding of the development of, and factors influencing reversibility of pulmonary vascular changes associated with many forms of heart disease will contribute to more satisfactory therapy. The tremendous interest and enthusiastic effort in the research laboratory to evaluate patients with these diseases will unquestionably shed much light on more definitive modes of management.

William H. Muller, Jr., M.D.

Editor's Note: Dr. Muller is Professor and chairman of the Department of Surgery, University of Virginia, Charlottesville.

Cervical Spine, Shoulder and Arm Pain

Diagnosis and Treatment

J. M. MEREDITH, M.D.
C. E. TROLAND, M.D.
JOSEPH F. KELL, Jr., M.D.
Richmond, Virginia

IN RECENT YEARS, attention has been focused on the cervical spine, shoulder and arm syndrome especially with respect to its surgical aspects. This includes consideration of the cervical disc symptom-complex (even more precise than its lumbar spine counterpart), the cervical rib and/or scalene muscle compression syndrome, the so-called whiplash type of cervical spine trauma, cervical spine trauma with or without concomitant cord injury, spondylosis with associated nerve root compression, and other lesions. The differential diagnosis will also be stressed, and clinical findings and simple laboratory tests utilized in the study of these cases, including oil myelography, will be emphasized. Certain operative findings in these conditions will also be described.

The differential diagnosis of the syndrome will first be considered:

1. *The scalene muscle compression syndrome and/or cervical rib:* This has been known for a long time and consists, as a rule, of unilateral arm pain beginning above the clavicle and extending down the arm to the ulnar side of the hand, occasionally to the median nerve side. These lesions are more often than not found in thin, long-necked individuals. Moderate pressure over the anterior scalene muscle above the clavicle aggravates the pain down the arm which may also extend upward to the scapular region and across to the precordial area thus simulating a cardiac lesion, if on the left side. X-ray examination of the thoracic inlet and shoulder on the painful side will reveal a cervical rib (Fig. 1) if present. In our experience, it is necessary to remove this anomalous rib in addition to dividing the anterior scalene muscle if complete relief is to be obtained. Occasionally, a symptomless cervical rib is present in an individual or bilateral ribs are present with pain only on one side.

2. *Cervical protruded disc* is due to a postero-lateral extrusion of a herniated disc, practically all of them occurring at C-5, C-6 or C-7 interspaces; occasionally C-4 interspace is involved with *lateral shoulder pain and sensory loss only.* The relief of pain post-operatively is often more dramatic and complete and earlier than in some of the lumbar disc cases. The lesion is usually seen in stocky, broad-shouldered individuals. The symptom-complex is very similar to the cervical rib-anterior scalene compression syndrome, but the tenderness in the disc cases is chiefly in the cervical spine interspaces when firm pressure is made over them by the examiner's thumb, such pressure typically causing tingling down to forearm and fingers or thumb. The pain is also aggravated by retraction of the head backward with the occiput toward the painful shoulder and, with this maneuver, the patient often complains of numbness or tingling in one or more fingers of the hand. The biceps or triceps tendon jerk is usually definitely diminished on the painful side compared to the normal side. When these findings are combined with a definitely, although only rather slightly narrowed interspace seen on the lateral x-ray film (Fig. 2) one can proceed with operation without a previous oil study (Fig. 3), in our opinion, with the expectation of finding either a soft, removable disc or, in the older individuals, a hard bony arthritic spur compressing the appro-



Fig. 1—Chest film showing bilateral cervical ribs (arrows). These usually have to be removed surgically when disabling pain in the appropriate extremity develops along with section of the anterior scalene muscle.

From the Department of Neurological Surgery, Medical College of Virginia, Richmond.

Read at the annual meeting of The Medical Society of Virginia in Roanoke, October 16, 1956.



Fig. 2—Lateral view of the cervical spine showing definite narrowing of the sixth cervical interspace (arrow). The adjoining cervical interspaces are considerably wider, this patient having a large disc at the sixth cervical interspace causing pain and tingling in the index and middle fingers on one side only.

priate nerve root. Removal of the soft disc or nerve root decompression in the latter case is almost immediately followed by dramatic relief of pain in the shoulder, arm and hand. Undoubtedly, years ago, before cervical discs were clinically recognized, many anterior scalene muscles were divided for the relief of pain actually and primarily due to cervical protruded discs, with secondary spasm of the homolateral anterior scalene muscle.

3. (*a*) *Cervical arthritis,* (*b*) *spinal malignant metastases, and* (*often unsuspected*) (*c*) *cervical spine trauma* (Fig. 4) are other causes of neck, shoulder and arm pain. X-ray examination, of course, is essential for the diagnosis of these lesions. Skull traction with the Crutchfield tongs in severe cases of cervical spondylitis will often produce definite relief and marked widening of the cervical spine interspaces as seen on portable lateral x-ray films made while the traction is in place. It separates the vertebral interspaces and therefore relieves pressure on the nerve roots; after a week or more of such traction, marked recession of the pain may be obtained.

4. *Cervical and upper thoracic cord tumor,* especially if unilateral and extramedullary and involving the lower or even upper cervical region (Fig. 5), can closely simulate a scalene syndrome, cervical



Fig. 3—Myelogram (pantopaque), A.P. view of the cervical spine. A large unilateral defect is visible at the fifth cervical interspace (arrows) showing a typical defect caused by a cervical protruded disc on one side causing unilateral shoulder, arm, hand, finger or thumb pain. These patients are usually extremely tender on firm pressure over the involved cervical interspace.



Fig. 4—Lateral view of the cervical spine showing marked fracture-dislocation with complete break in the lamina of the axis which is displaced forward on the third cervical vertebra (arrows). Occasionally, patients will be ambulatory with such a lesion and it is found by x-ray examination weeks or even months after trauma. In such cases, disabling pain will develop and the patient will usually hold his head in an eccentric position.



Fig. 5—Myelogram (pantopaque) showing a rather large intradural neurofibroma at the level of C-2-3 vertebrae (arrows) which had caused severe neck pain. The tumor was largely in front of the cord. The patient held her head tilted far to one side with pain extending down into the shoulder and arm on the left side and partial paraplegia was present; complete recovery followed its removal.

rib, or a cervical disc so far as the peripheral manifestations of pain are concerned. We have had several cases of proved cervical cord tumor in the last few years in which *unilateral* shoulder, arm and hand involvement, *not necessarily always with pain,* has been very difficult at first to ascribe to a surgical spinal lesion. In one patient who eventually proved to have such a tumor, a peculiar motor involvement of the arm was being treated by a psychiatrist for a period of time as a "hysterical phenomenon". Spinal puncture and a Queckenstedt test should, of course, aid very effectively in the diagnosis of mass lesions of the cord at whatever level. If the spinal fluid protein at the lumbar level is elevated above 45 mgm. per cent, or a partial or complete subarachnoid block is present on the Queckenstedt test, then a myelogram (pantopaque) study should be carried out. Bilateral jugular compression in the patients with extramedullary cord tumor usually induces severe, radiating pain in the dermatomes of the involved posterior nerve roots either unilaterally or bilaterally especially if a neurofibroma is present. A Horner's syndrome may also occur in certain cervical-upper thoracic cord tumors or in superior pulmonary (Pancoast) tumors of the lung (carcinoma) (Fig. 6).

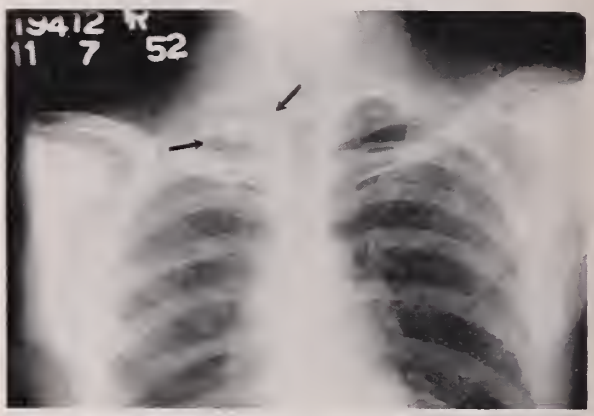


Fig. 6—Chest x-ray showing distinct haziness in the right lung (arrows) in the apex due to a superior sulcus (pulmonary) carcinoma (Pancoast tumor). This lesion will produce very disabling and constant pain in the homolateral shoulder, arm and hand, often associated with a Horner's syndrome, sometimes many weeks *before* demonstrable roentgen evidence of the chest tumor appears.

5. *Subacromial bursitis.* In these cases, there is often exquisite pain over the deltoid muscle, the locale of the subdeltoid bursa. X-ray examination may disclose calcification in the bursa itself but this is not always present. Novocaine injection of the bursa, diathermy applications, x-ray treatment, and excision of the inflamed sac by the orthopedist (in severe, intractable cases) affords relief if not complete cure; manipulation of the shoulder joint (if fixed and "frozen") under anesthesia may be necessary in a few cases. In the acute phase, this lesion is extremely painful but because of its lateral upper arm location with not very great radiation down into the lower arm, forearm or hand, it is not often confused with lesions discussed at the beginning of this paper. If the bursitis is *severe,* limitation of movement of the shoulder and pain are most noticeable when the shoulder is abducted from the chest wall or the arm is rotated internally, or the patient attempts to put his hand on his head or in his trouser's pocket.

6. *Pancoast tumor* (*superior sulcus pulmonary carcinoma*) or metastatic carcinoma from any source to the axilla and brachial plexus is almost always characterized by extremely severe, constant and intractable pain in the shoulder above the clavicle and often extending into the upper chest, posteriorly over the scapula and, if the greater part of the brachial plexus is involved by the growth, into the arm, forearm and hand. Pancoast tumor may be extremely difficult to demonstrate in the early months

of the illness, particularly by x-ray study of the chest. We know of no verified case of Pancoast tumor of the lung (carcinoma) that proved to be resectable with a resultant five-year (or more) cure after operation. Such "malignant" pain is relieved by only three procedures: (1) *Posterior rhizotomy* of the brachial plexus through an extensive lower cervical-upper thoracic laminectomy in patients who are still in good general condition; (2) *contralateral medullary tractotomy* or *high cervical cordotomy* by means of a posterior fossa-upper cervical spine approach; and (3) *unilateral or preferably bilateral frontal lobotomy.* Often a combination of (1) and (2) together is very effectual.

Mention should also be made of the so-called *"hand-arm-shoulder syndrome"* which occurs after a coronary occlusion or bursitis or fracture of the upper humerus or shoulder joint in which the arm and shoulder have been somewhat or completely immobilized for a number of weeks. Incident to this immobilization, a very distressing and often painful Sudeck's atrophy develops in the hand with a peculiar, constant aching pain in the hand and forearm. There are often atrophic changes in the bones of the wrist and hand demonstrable by x-ray examination. Such a lesion is greatly relieved by sympathectomy particularly if one or two novocaine blocks of the lower cervical sympathetic chain and stellate ganglion have afforded temporary but complete or almost complete relief for the duration of the block. Parenteral administration of cortisone or ACTH, or injection of compound F (hydrocortisone) in the shoulder joint itself may also be helpful in this syndrome.

The shoulder-arm-hand syndrome may follow *any condition* that produces pain in the shoulder for it is the pain that initiates the chain of events making up the syndrome. In addition to a coronary occlusion, such pain might follow tears in the rotator cuff of the shoulder[2], intramedullary or extramedullary tumors of the spinal cord, protruded cervical intervertebral discs (see above) and even disease of the gall bladder or periarteritis nodosa. *The first prerequisite is pain in the shoulder,* regardless of its cause. *Stiffness of the shoulder develops* later. This may occur at the onset of pain or it may follow after varying periods of time. The major cause of the stiffness appears to be *disuse.* The patient tends to avoid any motion of the shoulder joint to prevent the occurrence or intensification of pain. Disuse and stiffness in turn lead to more pain that further intensifies the disuse: thus a vicious circle is established.

Another cause of pain in the shoulder, arm and hand is *rheumatoid spondylitis* which is a chronic, usually progressive, disease. The diagnosis is made usually by the history of longstanding pain in the lower part of the back, the restricted thoracic expansion and the characteristic roentgenological findings of sclerosis of the sacro-iliac joints with marginal demineralization, involvement of the apophyseal joints of the spinal column and calcification of the paraspinous ligaments[1]. This pain may very easily refer itself also into the shoulder, arm and hand.

With further reference to lesions of the spinal cord causing pain in the shoulder, arm and hand, one must also consider syringo-myelia, poliomyelitis, herpes zoster and metastatic lesions of the spinal canal. Syringomyelia is not, of course, usually a painful disease but, rather, it comes on insidiously with wasting of the shoulder girdle and small muscles of the hand. However, there may be dull, aching pain in the shoulders and thorax that is steady and may persist[1]. It is thought to be a "central" type of pain. Poliomyelitis need only be mentioned for the diagnosis is usually not difficult. In the early, acute stage, however, severe neck and shoulder pain is well known.

Peripheral nerve lesions or tumors of the brachial plexus and even lower down in the arm and forearm should also be thought of with reference to unilateral shoulder, arm and hand pain. Certain thoracic and abdominal lesions might be considered early in the differential diagnosis of shoulder and arm pain such as pathological states of cardiac, diaphragmatic and sternal location. Peripheral vascular lesions worthy of consideration in the diagnosis of arm and shoulder pain are periarteritis nodosa, Raynaud's disease, phlebitis and aneurysm.

Askey[3] in 1941 was the first to use the term "shoulder-hand syndrome". At first, it was attributed, in Askey's report, *only to coronary occlusion* and the resultant immobility of the left shoulder that follows that serious condition.

Personality imbalance or "psychiatric deviation" of the personality of a patient seems to be important also in the production of the painful shoulder-arm-hand syndrome in certain individuals[2]; some of them are frankly of neurotic tendencies. Patients who will not start exercising the shoulder when asked to do so by their physician after the initial illness or trauma resulting in shoulder and arm pain are more apt to develop it. There are several step-by-

step phases of the syndrome: (1) shoulder pain; (2) stiffness in the shoulder if mobilization and active and passive exercises are not started in time; (3) after a latent period (which varies from days to months in the individual cases) vasomotor and trophic changes may develop in the hand. *Vasodilation* is seen first with increased temperature and sweating of the arm and hand. (4) If these latter developments are unchecked, then the vasodilation disappears and the hand becomes pale and dry, sometimes cyanotic, the skin becomes stretched and taut in the forearm and hand and trophic changes appear[1]. Finally (5) the small muscles of the hand even become atrophic and Dupuytren-like contractures of the palm and fingers develop with x-ray evidence of osseous demineralization in the wrist and hand bones. All of the above five symptom-complexes are *phases of the same syndrome.* Merely depending on which phase the patient is first seen in, he will show pain, immobility, trophic changes, atrophy, etc.

Treatment of the underlying cause is also all-important as *is the unraveling of the neurotic personality,* if present, by the psychiatrist so that the patient himself will be willing to undergo passive and active exercise and other physical therapeutic procedures necessary to restore the extremity toward normal.

In considering what is capable of producing the initial pain in the shoulder, which is the real key to the diagnosis and proper treatment of the syndrome in every case, it is important to keep in mind the *concept of intrasegmental diffusion of pain within the spinal cord.* A synonym for the syndrome is "reflex sympathetic dystrophy".

In summary, the sources of the shoulder and arm pain are distributed from the anatomical standpoint into ten different locations or diseases[1], (in part already mentioned above): (1) *Diseases of the diaphragm,* especially irritative lesions. (2) *Cardiac-anginal disease.* (3) *Bursitis and arthritis,* fracture of the shoulder or upper humerus, tumors of the shoulder. (4) *Vertebral lesions:* fractures, arthritis, spondylitis, cervical discs. If C-5 root is involved at the fourth cervical interspace by a disc, the pain will be confined largely to the region of the deltoid with sensory loss over this area *without extension down the arm or hand.* Disc lesions are rare at this interspace (C-4) in our experience, most of them in our clinic being at the fifth, sixth or seventh cervical interspaces. (5) *Lesions of the cord:* Even in syringomyelia, dull aching in one or both shoulders will occur and also in poliomyelitis (early phase) severe aching in the shoulder muscles can be experienced. *Herpes zoster* should be mentioned as involving the cord and also various tumors of the cord itself. (6) *Brachial plexus lesions* including trauma (gunshot and stab wounds) traction injuries, cervical rib and scalene syndrome. (7) *Peripheral nerve lesions* especially trauma, tumors and serum and virus peripheral neuritis. (8) *Thoracic disease:* cardiac-diaphragm (see No. 1 above) and sternal lesions. (9) *Certain abdominal lesions:* gall bladder disease and conditions involving the abdominal surface of the diaphragm. (10) *Peripheral vascular disease* including periarteritis nodosa, Raynaud's disease, aneurysm and phlebitis.

The sympathetic supply to the blood vessels in the hand is derived from cell bodies situated in the first through the fourth thoracic segments of the spinal cord. The *"internuncial pool"* first elaborated by Lorente de No in 1938[1] refers to the series of neurones in the gray matter of the cord capable of spreading an impulse *up and down over several segments of the cord.* These physiologic concepts are important to keep in mind in interpreting the cause of shoulder pain from a distant or remote lesion elsewhere in the body.

Treatment of the syndrome with reference to the painful stiff shoulder and the so-called "shoulder-arm-hand syndrome" not due to a primary surgical lesion (see above): Good results have been obtained with: (1) repeated procaine blocks of the stellate ganglion on the affected side; (2) parenteral administration of Cortisone or ACTH or both; (3) injection of Compound F (hydrocortisone) into the affected shoulder joint itself; and (4) surgical removal of the stellate ganglion and upper thoracic sympathetic chain. It is best to try the simpler non-operative methods first. If these do not bring about the desired relief, the other methods, such as sympathectomy, may be utilized. In some patients who have the shoulder-arm-hand syndrome, it was found that, on the whole, repeated sympathetic blocks with novocaine gave somewhat better results than did the use of ACTH and cortisone although the results of either treatment in the *early phases* was extremely good. Once the repeated novocaine blocks have given a satisfactory response, maintenance therapy may not be required, while management with ACTH and cortisone will necessitate a longer period of such therapy as a rule. It must also be remembered that the use of cortisone therapy may precipitate a previously quiescent gastric or

peptic ulcer or it may mask an active infection such as pulmonary tuberculosis and reactivate it even to the extent of precipitating tuberculous meningitis in some cases of quiescent pulmonary tuberculosis. The beneficial effects of all of these methods are limited to those patients who have *early* changes in the arm and hand, such as vasodilation, increased surface temperature, stiffness and painful swelling. When changes in the hand are more advanced with a dry, pale or cyanotic extremity that shows beginning atrophy of the hand muscles, the results are not so satisfactory. However, novocaine blocks of the stellate ganglion are almost always a helpful procedure even in this later phase. They may give marked symptomatic relief in addition to their role as a therapeutic test. If the novocaine blocks give partial or only temporary relief, surgical removal of the stellate ganglion and upper thoracic sympathetic chain is indicated. When repeated sympathetic novocaine blocks are not successful, the results to be expected from surgical intervention (sympathectomy) are uncertain. Unfortunately *not all* of the sympathetic innervation of the upper extremity is carried through the stellate ganglion. Some of the fibers apparently pass out of the spinal cord by way of the *ventral roots of the cervical segments of the spinal cord* and are intimately associated with the peripheral nerves through their course to the lower arm and hand. It is, of course, not feasible to attempt to interrupt these fibers when or as they become part of the motor portion of the brachial plexus and this may explain the uncertain results following sympathectomy of the arm. Most of these patients require salicylates to relieve the pain as well as *graduated and supervised physical therapy management* (especially passive and active exercise) and *encouragement by an expert.* If the scalene-cervical rib syndrome can be ruled out and the cervical disc syndrome is not too specific or typical, or another more serious intradural lesion of the spine is suspected, a pantopaque (oil) study is necessary and advisable and is the most important single test to carry out together with a protein determination of the spinal fluid and a Quackenstedt test to be certain that one is not overlooking a surgically remediable lesion of the cord or vertebral canal as the cause of the shoulder, arm and hand pain.

Finally, orthopedic manipulation of a stiff frozen shoulder with "bursitis-like" pain and limitation of certain movements, is still very effective in *selected cases* and even occasionally the method of choice. The operator must keep in mind, however, that too vigorous manipulations of a chronically stiff shoulder can fracture the humerus or shoulder joint.

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Schering Releases Arthritis Film

A new 16 mm. color motion picture on the uses of steroids in the treatment of rheumatiod arthritis has been released for showing to professional groups by the research division of Schering Corporation.

The film reviews the chemistry, physiology and clinical application of the new "Meti" steroid hormones in rheumatoid arthritis and other collagen diseases. It presents the most commonly accepted theories of adrenal corticosteroid therapy and reflects the current knowledge of the subject.

The 25 minute film, which is the fourth in Schering's series on hormone therapy and the endocrines, was produced by the company's Clinical Research Division and Biochemical Research Department. Three leading rheumatologists and endocrinologists cooperated: Dr. Joseph Eidelsberg, Associate Professor of Clinical Medicine at New York University's Post Graduate Medical School and Chief of the Endocrine Clinic at University Hospital, New York, Dr. Abraham Kolodin, Senior Attending in Medicine at Mountainside Hospital, Montclair, N. J. and Dr. Evelyn Merrick, Rheumatologist at the Orange Medical Center, Orange, N. J.

The film is available to medical and allied professional groups on loan without charge. "'Meti' Steroids in Rheumatoid Arthritis" and other Schering films may be obtained by writing to The Audio-Visual Department, Schering Corporation, Bloomfield, N. J.

The Hypophysectomy Program for Advanced Breast Cancer

A Preliminary Report

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IN 1953 Luft and Olivecrona[4] reported remission of advanced breast cancer following hypophysectomy. Pearson and his group demonstrated that following hypophysectomy remission could be attained in oophorectomized adrenalectomized patients[6]. We wish to report on our preliminary experience with surgical ablation of the pituitary in patients with advanced breast cancer.

PATHOLOGIC PHYSIOLOGY

Pearson, West, Hollander, and Treves demonstrated unequivocal stimulation of advanced breast cancer with estrogen by means of the calcium balance technique[7]. Approximately half the patients with breast cancer have tumors which are sensitive to estrogen and should benefit by the removal of this growth stimulant. Oophorectomy removes the major estrogen source in the premenopausual woman. The adrenal cortex is a significant source of estrogen in the postmenopausal patient or the patient who has relapsed from a castration remission. Hypophysectomy removes the source of follicle stimulating hormone and corticotrophin. These pituitary hormones stimulate the ovary and adrenal to make estrogen. It is also possible that removal of growth hormone, prolactin, or an unknown pituitary factor may be responsible for some hypophysectomy remissions. We will report shortly on remission following incomplete hypophysectomy. The study of such partially ablated patients may be fruitful in elucidating the mechanism of remission.

SELECTION OF PATIENTS FOR HYPOPHYSECTOMY

The selection of patients for hypophysectomy is an unsettled subject. One might elect to defer ablative surgery as long as possible and then to do adrenalectomy first, reserving hypophysectomy for adrenalectomy failures or relapses. One might elect to do hypophysectomy as the first palliative treatment for generalized disease. The optimum treatment will only be developed by clinical and physiological studies with various sequences[1].

Because endocrine ablative procedures have given higher remission rates than treatment with exogenous steroid hormone we have reserved the latter for the treatment of ablative relapses. All patients reported on here had advanced progressive metastatic disease with symptoms. Three of the patients were premenopausal at the time of recurrence and had been castrated with uncertain results. Table I summarizes the salient data.

METHOD

Preoperative care is essentially the same as for bilateral adrenalectomy[3]. The night before surgery the patient is given six intramuscular injections of 50 mg. cortisone acetate at hourly intervals. These are spaced so that the last injection is given twelve hours before surgery. On the morning of surgery the patient receives 100 mg. cortisone acetate by mouth on call to the operating room.

The operation is carried out through a transfrontal approach under endotracheal anesthesia. The frontal lobe is elevated, the stalk severed and the pituitary gland removed. Zenker's solution is applied to the sella after thorough curettage.

After surgery, cortisone acetate is given intramuscularly in divided doses starting with 50 mg. every four hours on the day of surgery. The dose of cortisone is decreased gradually until a maintenance dose of about 50 mg. daily is adequate. A Foley catheter is inserted at surgery and the urinary volume measured every two hours. A continuous infusion of 5% glucose in water is started after surgery and given at a rate of 100 c.c. per hour. If significant negative water balance should occur prompt administration of pitressin tannate in oil is indicated.

From the Departments of Internal Medicine and Neurologic Surgery and the McIntire Tumor Clinic.

Usually 1-2 units is sufficient for a 24-hour period.

Usually the patient is able to take adequate liquids by mouth on the second postoperative day. Rapid resumption of activity is encouraged. The patient is discharged on a maintenance dose of cortisone, usually 50 mg. daily. No thyroid medication is given at the time of discharge. It requires at least two months for thyroid insufficiency to be manifest. Prior therapy is unnecessary and interferes with radioiodine evaluation of thyroid function. When thyroid insufficiency does become troublesome, it is easily corrected with 120 mg. thyroid substance daily. Obviously, no gonadal hormone replacement is given.

Permanent diabetes insipidus of clinical significance is unusual after surgery. It has not occurred in our cases. When it does occur it can be controlled by insufflation of posterior pituitary powder.

STUDIES OF PITUITARY FUNCTION

Following complete hypophysectomy, patients suffer from adrenal insufficiency in from two to ten days when cortisone is withdrawn. The symptoms are similar to those described when cortisone is withdrawn from adrenalectomized patients. During this period the plasma corticoid and urinary ketosteroid is very low. In patients maintained on cortisone alone, myxedema will develop in two to three months. The radioiodine picked up by the thyroid gland is less than 5%. Follicle stimulating hormone is absent from the urine. Patients with some residual pituitary function will show less drastic metabolic changes but may still enjoy satisfactory remissions[2].

CASE HISTORIES

The case histories of two patients with striking objective improvement following hypophysectomy are presented.

1. A thirty-nine year old white female, (H.G.), was seen in April 1950 for a mass in the right breast which had been present for two years. Supraclavicular disease was present. Biopsy revealed infiltrating duct carcinoma. Simple mastectomy with some axillary dissection, oophorectomy, and x-ray therapy were carried out. In March 1951 severe progressive right hip pain developed. No bone metastases were demonstrated but radiotherapy produced considerable improvement. She remained well until April 1955 when a right Horner's syndrome developed. An ill defined mass was present in the right supraclavicular space. Biopsy showed carcinoma consistent with metastases from the primary breast tumor. Radiotherapy produced transient shrinking of the mass but within a few months it recurred. A mass developed over the thyroid cartilage which grew to 6.5 x 2.5 cm. Radiotherapy of this mass produced little response. Nausea and vomiting developed late in 1955 and an epigastric mass was palpated. Laparotomy in January 1956 revealed an abdominal mass in the region of the pancreas. Biopsy was compatible with the original breast carcinoma. At this time no pulmonary or bone metastases were demonstrated but a thirty-pound weight loss had occurred. The patient had deteriorated to the stage of complete invalidism.

Hypophysectomy was performed in February 1956. Following surgery there was an excellent recovery. Nausea and vomiting ceased. Appetite improved with attainment of former body weight. Within a month the abdominal mass and a previously described supraclavicular node were no longer palpable. The mass over the thyroid cartilage slowly shrunk so that in April it was no longer palpable. There was resumption of moderate activity. At this time she is completely asymptomatic.

This patient is of special interest because the hypophysectomy may have been incomplete. Clinical myxedema has not appeared although thyroid function has diminished. Under basal conditions, cortisone may be withdrawn for ten days with no symptoms of adrenal insufficiency. Detailed studies on this patient will be presented in a future publication.

2. A sixty-year old white female, (M.M.), had a radical mastectomy in November, 1951, for infiltrating duct carcinoma. She was well until May 1955, when cough, dyspnoea, and weight loss occurred. A chest film showed right middle lobe atelectasis and bilateral stringy infiltration forming from the hilus. Bronchoscopy demonstrated endobronchial tumor in the middle lobe bronchus and biopsy was consistent with the appearance of the primary tumor. No other metastatic involvement was evident. The dyspnoea and cough progressed to the point where the patient was incapacitated. Hypophysectomy was carried out in January 1956. Almost immediately after operation there was considerable clinical improvement. Withdrawal of cortisone produced weakness, hypotension, and nausea within forty-eight hours and cortisone treatment was resumed. She was discharged on 50 mg. cortisone daily. Within a month she was symptom free and was gaining weight. The signs of myxedema were evident. Radioiodine uptake was 10.3% in twenty-four hours over the thyroid. She was started on thyroid substance, 120 mg. daily with relief of signs and symptoms of thyroid insuffiency. In February 1956, her chest film showed

no change from preoperative appearance but bronchoscopy showed marked regression of the tumor. The occurence of myxedema, the response to cortisone withdrawal, and the postoperative absence of measurable urinary gonadotropin suggest the hypophysectomy was complete. The excellent clinical remission continues up to the time of the present writing.

POSTOPERATIVE DEATH

Two postoperative deaths occurred. In one patient, M.D., the anatomy of the sella was such as to prevent adequate visualization. As a result the ablation was unduly traumatic. Death appeared to be due to hypothalamic injury. Should this anatomical difficulty be encountered again, the hypophyseal stalk would be cut and no attempt would be made to remove the gland. M.G. was an unusually poor operative risk. A metastatic mass filled the pelvis. A hydronephrotic kidney produced by neoplastic obstruction of the ureter had been removed previously and the opposite ureter implanted in the bowel. Deterioration was extreme. When surgery is performed on such patients the operative risk is great but still may be worth taking in individual cases.

DISCUSSION

Our results have encouraged us to utilize the procedure as a major palliative treatment for advanced breast cancer. Patients are selected after consultation with the radiotherapist so as to reserve hypophysectomy for those patients whose tumor is too diffuse or badly situated for adequate radiotherapy. In premenopausal patients hypophysectomy is reserved for oophorectomy failures or relapses. In post menopausual patients hypophysectomy is done for diffuse symptomatic disease. Those patients who have enjoyed a favorable response to the procedure have returned to normal activities. These preliminary results are in accord with the extensive studies of Pearson[5].

SUMMARY

Hypophysectomy has been carried out in nine patients with advanced breast cancer. There were two postoperative deaths. One patient failed to respond. Four patients have achieved striking remission. Two patients have had striking pain relief and will require further objective evaluation.

The procedure is a valuable modality of treatment for advanced breast cancer.

TABLE 1

Patient	*Age*	*Menses*	*Prior Oophorectomy*	*Prior Androgen and Estrogen*	*Metastases Principal*	*Date of Operation*	*Result*
1. J.H.B.	36	Post oophorectomy	Aug. 1952	None	Pleura, lung, chestwall	Mar. 28, 1956	Complete remission
2. M.K.D.	49	Post oophorectomy	Dec. 1955	None	Chest, pelvic peritoneum, skin	July 12, 1956	Postoperative death
3. H.G.	44	Post oophorectomy	Apr. 1950	None	Cervical nodes, axillary nodes, supraclavicular nodes, pleura, abdomen	Feb. 16, 1956	Complete remission
4. M.G.	62	Post oophorectomy	1939	Temporary improvement	Axillae, pelvis, supraclavicular nodes	May 29, 1956	Postoperative death
5. J.K.	53	Post oophorectomy	1942	No effect	Chest, cervical node, neck, left axilla, pleural effusion	Jan. 19, 1956	No remission—died
6. M.M.	60	Post menopausal	None	None	Right lung	Jan. 27, 1956	Complete remission
7. G.S.	57	Post menopausal	None	None	Spine, skull, vertebra, chestwall	Aug. 28, 1956	Complete pain relief—disappearance of visible skin lesions
8. I.S.D.	53	Post menopausal	None	None	Pleura, skull, pelvis	Oct. 9, 1956	Complete pain relief—Too early to see objective regression
9. H.D.S.	47	Post menopausal	None	No effect	None	Cervical spine, pelvis, ribs	Dec. 14, 1956	Striking pain relief—Too early to see objective regression

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Let's Reminisce!

In a letter from Dr. Christopher Tompkins, (Virginia Medical Monthly, February 1876) while "spending a short vacation in the South" (at St. Augustine, Florida) he speaks of Aiken, S. C., whose hotels and boardinghouses can only accommodate 600 or 700 guests and there are 1500 visitors annually, most of whom are in search of health. Here "I saw in use the 'respirator', not the wire gauze described by the books, but a handkerchief or slip of woolen goods, tied over the mouth, warmed by the breath, through which the external air was inhaled, thus depriving it, to some extent, of its cold and solid impurities."

"In travelling South you must needs bear patiently delays and inconveniences that do not occur North. The cars on some of the railroads, to be plain, are simply devoid of all comforts and many conveniences; and the eating furnished at the way stations, though abundant, is badly cooked, and you must necessarily often carry your provisions with you, unless you want that delicate and important part, known as the stomach and digestive canal, to revolt at the indignities offered it. . . . The ocean steamers from the North are much patronized, and I am told are elegant in their appointments and cheap in their fares. . . . It will be well for the traveller to have his pocket well lined with money. Expenses of travelling South are in excess of those in the North, and after arriving at your destination, if you resort to private boarding, it will cost about twice as much as it could be obtained for in Richmond—all attendance, nursing, etc., extra. But the hotels are improving, and many now are first-class, charging $4 a day. Doubtless in a few years we shall have offered, during the winter months, cheap tourists' tickets for the South—just as, in the North, they are now so abundant during the summer months."

Urological Complications of Pelvic Surgery

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ACCIDENTAL INJURY to the urinary tract is one of the most serious risks of pelvic surgery in every hospital and in the hands of the most skilled operators. With the increasing magnitude of pelvic operations in the attempt to cure cancer, the number of injuries to the urinary tract is increasing.

BLADDER INJURIES

Injury to the bladder is the most common urologic complication of pelvic surgery. When unrecognized, a fistula is almost inevitable. When recognized and repaired at once, there is almost never an unfavorable sequel.

Bladder injury can occur while opening the peritoneum when previous surgery has been performed and peritoneal adhesions bind the bladder. The presence of large tumors under the bladder can distort relationships and, certainly, a full bladder encourages injury.

The bladder may be injured during total hysterectomy while it is being freed from the anterior wall of the cervix and vagina, especially when there is alteration of landmarks by large tumors of the uterus, cervical myomata, pelvic infections, endometriosis or previous pelvic surgery. Unless the anterior vaginal wall is widely separated from the bladder, it is very easy to include and injure the bladder in the sutures used to close the vaginal cuff and in peritonealizing the pelvic floor.

We have seen bladder injury in the repair of inguinal hernias and suspect that a full bladder resulted in its becoming a part of the hernial contents. Where fistula did not result, we have seen stones form on sutures that penetrated the bladder wall. The first time we saw a stone clinging to the bladder near its dome, it was as consternating as seeing a man walking head down across the ceiling—a gross breach of Isaac Newton's laws of gravitation. A careful second look, however, revealed it clinging to an incrusted black silk suture. The suture was cut with a cystoscopic scissors and was removed together with the stone by cystoscopic rongeur.

This leads directly to urologic advice on how to prevent bladder injury and to recognize it immediately should it occur. Since most patients are catheterized before pelvic surgery, it would seem reasonable to use a Foley catheter and to leave it indwelling during and for 12 to 24 hours after surgery. The catheter should be unclamped and the bladder emptied when the patient is placed on the operating table. About 15 cc. of methylene blue solution should then be injected through the catheter and it should be clamped again. This procedure is simple and offers the surgeon the following advantages:

1. It assures an empty bladder.

2. The palpable Foley balloon is a landmark to the location of the bladder.

3. Should the bladder be inadvertently opened, the escape of blue dye would be observed at once.

4. Localized trauma to the bladder can be prevented from "breaking through" post-operatively by having the indwelling catheter in place to avoid over-distention.

Vesicovaginal fistula following total hysterectomy generally occurs high in the vault of the vagina. No attempt ought to be made to repair these for several months until the inflammatory process of the area has completely subsided and all induration of the area has disappeared. Delay is advisable also for the reason that some of these fistulas close spontaneously.

We have no criticism of those who repair these fistulas by the vaginal route except to point out that the ureteral orifices are more easily visualized and avoided by the suprapubic route; also combined urethral and suprapubic drainage adds to the assurance that the bladder will remain undistended during the critical post-operative period.

The suprapubic approach is simple, direct and in our 8 cases, 100% successful. Certain points in the technique, none of them original, add to the ease and safety of the procedure.

The patient is cystoscoped pre-operatively and an ureteral catheter is passed through the fistula into the vagina. A wire suture is tied to the vaginal end

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of the ureteral catheter and then led into the bladder. To the vaginal end of the wire suture a golf-ball sized sponge rubber ball is attached so that by pulling on the bladder end of the wire suture the rubber ball is carried into the vagina. A Foley catheter with a large bag is passed into the bladder through the urethra and the bag is inflated to 50 cc. to make identification of the bladder easier.

At operation, the bladder is opened extraperitoneally. The urethral catheter is removed. Traction on the wire suture brings the rubber ball to bear on the vaginal side of the fistula and brings it prominently into the field of vision. The excision of the fistula by knife is aided immeasurably by traction on the rubber ball. After excising the tract, the vagina and bladder are separated for about 1.5 cm. around the circumference of the fistula. This is carried out carefully, chiefly by blunt dissection and is best performed with long, curved Metzenbaum scissors. The vaginal flaps are then brought together with interrupted mattress sutures of double O chromic cat gut in order to invert the vaginal edges into the vagina. The same is done to the bladder flaps with the edges inverted into the bladder. Most important is closure without the slightest tension. The sutures must not be tied too tightly. A suprapubic catheter of large caliber should be brought out at the highest point in the bladder and an urethral catheter of good size (F24 Foley—5 cc. bag) should also be used.

There is no virtue in more than two rows of sutures. Excessive suturing may lead to necrosis. Placing the vaginal suture line at right angles to the bladder suture line, though theoretically advantageous, requires more extensive dissection of layers and has not been done in our cases. There is no rational basis for indwelling ureteral catheters or for placing patients in the prone position during the post-operative period. Meticulous avoidance of catheter blockage is essential. The suprapubic tube can be removed in 10 days and the urethral catheter about four days later.

URETERAL INJURY

Ureteral injury occurs in about 2.5% of all pelvic surgery. It occurs often in complete hysterectomies, most often in radical pelvic surgery but we have encountered it in all types of pelvic surgery including a retrocecal appendix, combined abdominoperineal resection and adnexal surgery.

Ureteral injuries may be unilateral or bilateral. They occur usually within 1-3 cm. of the ureterovesical junction but may be as high as the pelvic brim.

The symptoms and signs may be:

(1) None at all or minimal.

(2) Pain due to obstruction.

(3) Sepsis due to infection.

(4) Extravasation.

(5) Oliguria or anuria.

(6) Fistula.

How then to avoid ureteral injury? Certainly, in difficult cases the use of inlying ureteral catheters is of inestimable aid. How often the surgeon has volunteered the comment that it was fortunate that catheters were in place during a particularly difficult case! If catheters are not in place and unexpected difficulties are encountered or if ureteral injury is suspected, it is an easy matter to cystocope the patient on the operating table before closing the abdomen and to pass catheters through the suspect or threatened ureter. A freshly injured ureter can be repaired most easily. Under no circumstances should an injured ureter be tied off in the hope that asymptomatic atrophy will follow unless one is certain that the opposite kidney is normal. Merely palpating the opposite kidney is not enough.

It is not inappropriate to remind you of the frequency of urological anomalies. The presence of double or bifid ureters and the frequency of their abnormal position may at times lead to catastrophe. This brings to mind a recent case where a gynecologist palpated a pelvic mass and freed up a good portion of it before it suddenly and fortunately occurred to him that he was dealing with a fused pelvic kidney. Where extensive surgery is contemplated, pre-operative urologic and urographic studies cannot be considered an extravagance.

When ureteral injury is recognized at the time of surgery, repair should be undertaken at once. Where the ureter is ligated without clamping, simple deligation and an indwelling catheter inserted from below is adequate treatment. Where it has been crushed with a clamp and ligated, necrosis and extravasation, or fibrosis with stricture, is too probable a sequel to hazard only deligation and catheter drainage. If the injury is low enough, the ureter is transected above the point of injury and anastomosed to as low a point in the bladder as possible by the simplest method. If the injury is high on the ureter, the injured area is excised and end-to-end anastomosis performed. The technique of Davalos in which the ureteral ends are fish-mouthed, the angles

are approximated by everting mattress sutures and then the remainder of the anastomosis is closed by about 4 more everting mattress sutures has proven to be the most satisfactory method. This results in a larger caliber of the ureter at the point of anastomosis and prevents stricture.

Where there is considerable loss in length of distal ureter, a bladder flap can be utilized to form a tube to which the ureter can be anastomosed. An almost indefinite length of ureter can be replaced by an isolated ileal loop with isoperistaltic anastomosis of ureter to the upper end and bladder to the lower end.

Where injury is recognized late—after 24 hours—the problem is changed. Bilateral ureteral obstruction must be relieved at once. Cystoscopy and passage of ureteral catheters will indicate the level of the obstruction. Minor obstruction may even be overcome by catheter. In many instances, it is unwise to attempt definitive repair in a patient who has just undergone severe surgery and who is in poor condition. Ureterostomy in situ or pyelostomy bilaterally as a life-saving procedure is advisable. If ureterostomy is done at the mid-ureteral level, the presence of extravasation can be determined and the area is accessible and can be drained. No attempt at definitive repair should be made in the presence of extravasation. It is doomed to failure. Only renal drainage and penrose drainage of areas of extravasation should be done. Definitive repair by the techniques described above can be carried out several weeks to 2 to 3 months later when infection infection and induration have subsided and the general condition of the patient permits.

URETHRAL INJURIES

The close proximity of the prostate, external urethral sphincter and bulbous urethra to the rectum makes an inlying Foley catheter a great friend during abdomino-perineal recto-sigmoidectomy. We have been called to the operating room in one case where the prostate has been inadvertently removed en masse with the rectosigmoid. Fortunately, the trigone and ureteral orifices were intact and an anastomosis of the urethra and vesical neck was carried out as in the radical perineal prostatectomy. In another abdomino-perineal recto-sigmoidectomy, the bulbous urethra was partially avulsed. This defect could be only partially closed and covered with surrounding soft tissues. It healed without stricture around an indwelling urethral catheter. These injuries would have been avoided with indwelling urethral catheters as landmarks.

ACUTE URINARY RETENTION

Acute urinary retention following pelvic surgery can be most aggravating. All urologists have had the experience of being called in to see a male in acute urinary retention after ablation of the rectum. In many cases, there is prostatic enlargement and the removal of the rectum displaces the bladder sufficiently to throw the previously compensated bladder into retention. It is always a help to have an opportunity of evaluating these patients pre-operatively for often we can predict the likelihood of retention, whether prolonged catheter drainage may alleviate it or whether transurethral prostatectomy will be necessary. Certainly all these patients, even though they seem to void well, should be checked post-operatively for residual urine.

The female who goes into urinary retention after pelvic surgery is well-known to all of us. She should be catheterized before overdistention and atony set in. If she needs catheterization more than once, it should be left indwelling. A good time to remove the catheter is when good peristaltic bowel sounds can be heard with the stethescope. A patient with ileus, nausea and vomiting is most unlikely to void spontaneously, as is the heavily sedated patient. When the catheter is removed, it should be replaced before more than 400 cc. of urine reaccumulates in the bladder. A bladder that is allowed to overdistend may delay spontaneous voiding for several days. There are a few women who will not be able to void for 10 days or longer. With these patients, one must be understanding and unperturbed. It often appears to the surgeon that these women are just perverse. Patience and equanimity are usually rewarded.

POST-OPERATIVE STRESS INCONTINENCE

There is a group of women who have undergone vaginal hysterectomy and anterior colporrhaphy who develop severe true stress incontinence which they did not have previously. These fail to respond to exercises and are quite miserable. These have responded very well to the so-called "pin-up" operation—suprapubic suspension of the urethra to the pubic symphysis—as described by Marshall and Marchetti.

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Thrombotic Thrombocytopenic Purpura

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THROMBOTIC thrombocytopenic purpura is a relatively rare disease, and few cases have been diagnosed during life. In recent years, however, there has been a growing literature on this subject, and greater awareness of the cardinal clinical manifestations of fever, thrombocytopenic purpura, hemolytic anemia, and bizarre central nervous system findings should lead to more frequent recognition before death. The literature has been reviewed by Barondess[1], who describes all previously reported cases and adds three of his own. He emphasized the many variations of the disease. Every recognized case has ended fatally. Adelson et al[2] in July 1954 report three cases, bringing the total to forty-nine. They suggested the term "thrombohemolytic thrombocytopenic purpura", since the more familiar name fails to include any mention of the hemolytic anemia, always a prominent feature of the disease. Histologically, the fundamental finding is the presence of vast numbers of platelet thrombi in the small arterioles and capillaries of almost all organs.

This case is reported on the basis of the rarity of the disease and the striking involvement of the pancreas, producing clinical diabetes mellitus, an infrequent finding in previous reports.

REPORT OF CASE

The patient was a forty year old white male taxicab operator who was admitted to the hospital September 13, 1955, with complaints of epigastric pain, nausea, and vomiting of ten days duration. The onset had been acute with no preceding illness, and his general health had always been good. There was no history of jaundice nor of any operations. He had been taking "Myracal Mints" to help him stop smoking and "Super-Anahist" for a perennial rhinitis. No other medication had been taken, and he had received no recent injections. He used alcohol sparingly. Shortly after the onset of his illness he had noted dark urine, yellow skin, and occasionally dark vomitus. The stools remained normal in color. He had become increasingly weak, and his wife had observed that he sometimes talked at random.

On admission he appeared well-nourished and moderately ill. There was marked icterus of skin and sclerae. Mentality was clear. Physical examination was otherwise negative except for moderate epigastric tenderness and abdominal distention. No masses or organs were palpated. There were no purpuric spots. Temperature was 99.4 F orally, pulse 120, and blood pressure 150/110 mm Hg.

Admission laboratory findings were as follows: Hgb 5.8 gm%; R.B.C. 2,240,000; W.B.C. 13,500 with essentially normal differential count. The red cells showed moderate anisocytosis, poikilocytosis, and hypochromia. A platelet count was not done, but platelets were noted to be adequate on one smear. Urinalysis showed a specific gravity of 1.017, 4+ albumin, no sugar, and a negative microscopic examination. There was a slight trace of bile, and the urobilinogen was positive 1:40. V.D.R.L. was negative.

His course was stormy and rapidly downhill. Two days after admission his temperature abruptly rose to 103° F and continued to show a remitting course thereafter. He was given citrated blood beginning September 14 for a total of 4500 cc. with no appreciable benefit. On September 19, after 3000 cc. of blood, the Hgb was 9.0 gm%. The W.B.C. on this date was 16,5000, and differential count showed 59% segmented forms, 5% stabs, 32% lymphocytes, and 4% eosinophiles. There was marked polychromasia, anisocytosis, poikilocytosis, "racquet cells", and 48 normoblasts per 100 WBC. There were 11.2% reticulocytes. A direct Coombs test was negative. Serum bilirubin was 5.4 mg%, of which 1.5 mg% was direct. On September 18 the urine was positive for porphyrins and strongly positive for hemoglobin. The red cell fragility test showed initial hemolysis at 0.50% and was complete at .28% (control 0.42%. and 0.32% respectively). On September 20 the serum amylase was 85 Bodansky Units (normal 20-60) and blood sugar 227 mg%. Cephalin flocculation was 1+.

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The patient was increasingly restless and disoriented but with no localizing neurological signs. On September 21 he had three generalized convulsions. A lumbar puncture yielded clear fluid under slightly increased pressure, with 3 lymphocytes per cu. mm. and protein of 105 mg%. Blood sugar the same day was 384 mg% and N.P.N. 62 mg%. On the following day blood calcium was 108 mg% and Hgb 11.0 gm% (after 4500 cc. blood).

The diabetes was easily controlled with moderate amounts of regular insulin. On September 21 intramucular cortisone was begun, a total of 600 mg being given during the last 24 hours. Hydrocortisone intravenously, 100 mg, was given three hours before death. At the end he became comatose, developed Cheyne-Stokes breathing, went into profound shock, his temperature rose to 106°, and he expired on September 22, nine days after admission.

AUTOPSY FINDINGS

Gross Examination: The body was that of a moderately well-developed and nourished middle-aged white male showing no external abnormalities except for a fairly marked jaundice of the skin and sclerae. No purpura of the skin was noted. The lungs were moderately retracted into the chest cavities. Scattered small petechiae were seen over the epicardium. A few small atheromatous placques were present over the intimal surfaces of the coronary arteries, but there was no narrowing of these vessels. There was slightly diminished crepitation of the lungs and the cut surfaces were dry and greyish pink in color. Examination of the brain revealed only slight edema of the meninges. Other than these findings gross examination of the body and viscera was not remarkable.

Microscopic Examination: In the heart, pancreas and adrenals numerous arterioles occluded or partially occluded by hyaline masses were noted. These vessels generally showed an irregular endothelial proliferation and a perivascular infiltrate of lymphocytes and a few neutrophils. Other arterioles in these organs were occluded by agglutinated masses of platelets and in these vessels the endothelial proliferation and perivascular infiltrate were not seen. These vascular changes were seen to a much less extent in the kidneys, liver and brain. None were seen in the lungs. In the heart, adjacent to many of the arterioles occluded by hyaline masses, were small areas of necrosis of the myocardium. Very extensive inter- and intralobular fibrosis of the pancreas was present and this fibrous tissue was infiltrated by a moderate number of lymphocytes. The islets of Langerhans were infrequently seen and those seen were distorted by fibrosis.

DISCUSSION

Anemia was the striking early feature of this case, and studies quickly pointed to an acquired hemolytic type. However, the epigastric pain and development of diabetes and elevated serum amylase suggested an acute pancreatitis. What disease state could produce these two apparently unrelated pathological entities was not clear at that time. Later in the development of the disease neurological abnormalities and mental deterioration became prominent manifestations.

At autopsy the microscopic findings in the pancreas seem to explain the clinical signs of pancreatitis and again point up the variegated picture of thrombotic thrombocytopenic purpura, depending on specific organ involvement. It is notworthy that no purpura was present, and no platelet counts were done for this reason.

In retrospect we feel the diagnosis of this rare condition may occasionally be made, even in the absence of purpura, if the following features of the disease are kept in mind: a case presenting the picture of hemolytic anemia but then showing disturbances of one or more specific organs and with non-focal neurological symptoms and low platelet count.

The autopsy findings explain all of the clinical manifestations except the pathogenesis of the hemolytic anemia. There was extensive involvement of the arterioles of the pancreas resulting in marked fibrotic changes. The heart and adrenals were similarly involved. These changes have been well described by Gore and others[3,4,5], and the genesis of the lesion is believed to be first damage of the arteriolar endothelium followed by aggregation of platelets at the site of damage and subsequent organization and hyalinization of the thrombus. In the case here presented, all the clinical manifestations except the hemolytic type of anemia can be ascribed to the formation of arteriolar thrombi. Of particular interest was the extensive involvement of the pancreas with the development of certain features of acute pancreatitis including diabetes.

Steroids were used and showed no beneficial effect. This is in line with the experience of Barondess, who used ACTH in one of his cases. One must note, however, that intramuscular cortisone was given only in the terminal 24 hours and intravenous hydrocortisone only three hours before death. Early

and intensive steroid therapy would still seem to be the most logical approach if the diagnosis is suspected. Since the adrenals may be markedly involved, as in this case, steroids would seem preferable to ACTH.

We have failed to find any reports incriminating either of two drugs this patient was known to have taken prior to his illness. "Super-Anahist" contains thonzylamine, ascorbic acid and the "A.P.C." formula, and "Myracal Mints" is composed of lobeline sulphate, none of which is prone to be antigenic[6]. Thrombotic thrombocytopenic purpura is basically a disease of unknown etiology.

SUMMARY

A case of thrombotic thrombocytopenic purpura is described, diagnosed at autopsy. The clinical features which may lead to ante-mortem recognition and possibly the early institution of successful steroid therapy are pointed out.

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Wider Use of Chest X-rays

Wisconsin radiologist has listed several reasons why a chest x-ray should be part of the routine procedure when a patient enters a hospital. Dr. Abraham Malamed of Evangelical Deaconess Hospital, Milwaukee, and St. Joseph's Hospital, West Bend, Wis., said in the March 2 Journal of the American Medical Association that routine chest x-rays are performed in only 30.1 per cent of all the hospitals in the United States.

Routine x-rays should be done in all hospitals, because:

—They uncover many previously unsuspected cases of chest abnormality or disease, especially tuberculosis and heart disease. Prompt treatment decreases the length of hospitalization, lengthens life, and stops the spread of communicable diseases.

—They prevent some errors in diagnosis, since the films may be used as checks against other findings.

—They provide valuable information to doctors preparing patients for surgery by showing the condition of the patient's lungs and heart. In this way the x-ray findings often have a direct bearing on the choice of an anesthetic.

—They provide a permanent record of a patient's chest condition during past hospitalizations. This helps make diagnosis of current conditions more reliable and accurate.

—Since more than 20 million patients are annually admitted to hospitals in the U.S., x-ray films could provide valuable data for the study of various diseases, their effects, and their incidence.

—X-ray films can be important records in compensation and accident cases. They show the condition of the patient immediately after the accident and can even reveal unsuspected injury.

—They plan an important role in the teaching program of the hospital, by providing the staff with an opportunity to learn the appearance of average or normal chest x-rays, which can then be compared with films of diseased chests.

Choriocarcinoma of the Uterus

With Report of Two Cases

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THIS HIGHLY MALIGNANT TUMOR has for years been known as chorionepithelioma, but according to Holman and Schirmer[1] the term chorinonephithelioma is a misleading one and should be discarded. This neoplasm is in reality *choriocarcinoma* and depending upon the rapidity of growth, cell type, pattern, and invasiveness should be called choriocarcinoma Grade I to IV. This tumor arises as a malignant change of the trophoblastic tissue, and therefore may develop following a full-term pregnancy, a miscarriage, an early abortion, or more frequently a hydatidiform mole.

It is generally thought that approximately 40% of choriocarcinoma follow hydatidiform moles, 35% develop after abortion, and 25% follow full-term pregnancy. In a recent comprehensive review of the unparalleled material presented by the 74 cases of choriocarcinoma from the Mathieu Memorial Chorionepithelioma Registry of the American Association of Obstetricians, Gynecologists and Abdominal Surgeons, Novak and Seah[2] presented the following results:

TABLE I.

TYPE OF PREGNANCY RESULTING IN CHORIOCARCINOMA

Hydatidiform Mole	29	(39.2%)
Abortion	28	(37.8%)
Full Term Pregnancy	17	(23 %)
Total	74	Cases

It is now generally recognized that the high incidence of incorrect diagnosis of choriocarcinoma is due largely to the fact that so often certain types of hydatidiform moles and the so-called syncytial endometritis, as well as other benign trophoblastic lesions, are mistakenly diagnosed as choriocarcinoma. Complete absence or lack of proper hormone studies and proper post operative follow up, as well as lack of a complete description of operative findings, in many cases have resulted in confusion and frequent incorrect diagnosis.

The unique experience of the author in encountering two cases of this rare malignancy in private practice within five years prompted the following brief review of this condition and the detailed case reports.

INCIDENCE

Choriocarcinoma is indeed a rare disease and in many of the larger clinics no cases have so far been encountered. Because of the frequent difficulty in microscopical diagnosis and misinterpretation of the pathologic picture, many cases reported as choriocarcinoma are actually highly proliferative hydatid moles. The extreme rarity of this disease is in a large part responsible for the failue of recognition and of early diagnosis. In proportion to the antecedent pregnancy condition, the incidence of choriocarcinoma following hydatidiform mole is slightly higher, since about 40% of all cases of choriocarcinoma are believed to follow vesicular mole. The incidence of hydatidiform mole is generally agreed to be about one in 2500 pregnancies, but it should be emphasized that in only a very small percentage of hydatidiform moles—probably one to three per cent—does this malignancy develop.

CLINICAL CHARACTERISTICS AND SYMPTOMS

Choriocarcinoma most often arises following the expulsion or evacuation of a hydatidiform mole, although symptoms may appear following an apparently normal miscarriage, or more rarely, a normal full-term pregnancy. The symptoms appear within a few weeks, or in some cases, many months or even years may elapse before the appearance of symptoms, as will be shown later. Contrary to the usual belief more fatal choriocarcinomata follow abortions and full-term pregnancies than those following hydatid mole, since about 60% follow these two conditions.

The primary, the most frequent and the cardinal symptom of choriocarcinoma, is bleeding. Therefore, any bleeding following miscarriage or preg-

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nancy in any form should cause choriocarcinoma to be suspected. The first indication of the disease, however, may be the appearance of metastases in distant organs, especially the lungs, brain, vagina, or vulva. With the extension of the uterine disease, bleeding become increasingly more profuse, with the development of weakness, pallor and anemia. Cough or hemoptysis should always lead to the suspicion of pulmonary metastases, and this is often confirmed by x-ray examination of the lungs. As the disease progresses, there is increasing emaciation and weakness; sepsis and cachexia appear, finally terminating in death.

CLINICAL APPEARANCE AND PATHOLOGY

This neoplasm most frequently appears as a somewhat circular, circumscribed raised or nodular mass of dark, reddish hemorrhagic tissue of grumous consistency, involving some portion of the uterine wall. It may show extensive surface ulceration, or in some cases, present as a smooth slightly elevated surface. In others, the tumor may develop within the wall of the uterus (intramural variety) and may not be reached when curettement is done. It is in this variety that the diagnosis is so often missed, and therefore negative findings from curettage may be misleading.

The lesion in the uterus may be comparatively small even in the patient who dies rapidly from extensive metastases. In some cases the primary uterine lesion undergoes complete regression, whereas death occurs from widespread metastases. Therefore, the extent of the primary lesion in the uterus is by no means an index of the clinical stage of the disease nor of the prognosis.

Microscopically, it is characterized by a disorderly growth of trophoblastic tissue, usually in alveolar fashion, invading into the uterine muscle, with a gradual destruction of the myometrium and extensive coagulation necrosis and hemorrhage. The villous pattern usually is soon lost, though slight traces may remain. Both layers of the trophoblast, the Langhans and syncytial, are involved in the invasive process, but in varying degree. Those tumors, presenting a predominence of Langhans elements, are considered the more highly malignant. According to Novak[3] the presence of large masses of trophoblastic cells of both types, with mitoses and anaplasia, especially in the Langhans cell, necrosis and hemorrhage and the almost invariable absence of villi, create a pattern that is unmistakably choriocarcinoma.

The finding of well formed villi, even though there is exhuberant trophoblastic overgrowth, should always make one hesitate to diagnose the growth as a true choriocarcinoma. In only one of the seventy four cases studied in the chorionepithelioma registry, one of widespread metastases and death, were villi seen in the microscopic sections. Novak has emphasized however that the occasional finding of villi does not completely exclude the diagnosis of choriocarcinoma. He also feels that the cellular changes in choriocarcinoma are less frequently important in diagnosis, but rather the general invasive growth pattern of the tumor.

It is important to emphasize that choriocarcinoma *is not* a neoplasm of the uterus per se, but of the embryonic chorion, the uterus becoming involved through local invasion by the tumor.

EXTENSION AND METASTASES

This tumor has in general been looked upon as "the most malignant and most fatal of known tumors," death occurring in from 70 to 80 per cent of all cases.

Although this malignant tumor may be considered as a carcinoma arising from the chorionic epithelium, in view of many of its pathological characteristics, it closely resembles sarcoma in the manner of its propagation. Pelvic extension is chiefly through vascular invasion, though the lymphatics are also involved. The broad ligaments are often invaded, as well as the uterine tubes and ovaries. More characteristic, however, is the retrograde transport of the tumor elements to the vagina and vulva. Vaginal metastases occur in a large percentage of cases and often appear early in the disease—indeed they may be the first indication of the presence of this malignancy. The vaginal lesion appears as a dark, reddish-blue nodule resembling a hemangioma, and often produces extensive hemorrhage. Such a complication occurred in one patient operated upon by the author in the University of Virginia Hospital in 1932. On the sixth postoperative day following pan-hysterectomy, an extensive vaginal hemorrhage occurred from a vaginal metastasis, which almost resulted in death.

Metastases to the lungs is even more frequent than vaginal metastases, and other distant organs that may be frequently involved are the brain, liver and kidneys.

DIAGNOSIS

Early diagnosis of this malignancy is necessary if any mode of treatment is to be successful. Early diagnosis means *diagnosis soon after inception of*

the tumor and not following the appearance of the first symptoms. When unexplained uterine bleeding occurs following any of the above enumerated conditions associated with pregnancy, the diagnosis of choriocarcinoma should always be borne in mind. A diagnostic curettement should be done without delay, but it should again be emphasized that this malignancy may be missed by curettement alone, especially in the invasive or intramural type, which occurs below the endometrial layer. It is indeed unfortunate that some of the characteristics of this tumor, upon which the diagnosis of malignancy is based, cannot be determined until after the removal of the uterus, at which time distant metatases may have already occurred. In these cases in which the problem of preoperative pathological diagnosis is based upon the tissue removed at curettement, the decision as to maligancy may be very difficult.

Novak has pointel out that the correct diagnosis may be made at one of several points, as shown in the following table.

Table II.

Point at Which a Definite Diagnosis May be Made

From Currettings	13
From Hysterectomy	32
From Biopsy of Metastases	6
From Autopsy	14
Not Determinable	9
Total	74

Holman feels that the ultimate clinical diagnostic method for choriocarcinoma is the biologic pregnancy test, and if this test is positive two weeks after the passage of a mole or pregnancy, a hysterectomy should be done.

Following hydatid mole, negative currettings mean nothing, and it is felt that a hormone pregnancy test should be done each two weeks for two months, and then monthly for one year as a proper follow-up to these cases. However, if on curettement microscopic evidence of large amounts of trophoblastic tissue is found without evidence of villi and with definite anaplastic activity of the trophoblast, there would be little doubt as to the malignancy.

In a large number of cases, the first suspicion of malignancy occurs only after the appearance of metastases in the vagina or vulva, or after the occurrence of cough and hemoptysis leads to x-ray examination and diagnosis of pulmonary metastases. Roentgen examination of the lungs should always precede hysterectomy for choriocarcinoma, because pulmonary metastases are frequently present before they are suspected and may be treated by x-ray therapy, since choriocarcinomatous tissue is particularly susceptible to x-ray.

One of the most interesting developments of female endocrinology has been the application of the principle of the Aschheim-Zondek and related pregnancy tests, in the diagnosis and prognosis of both hydatidiform mole and choriocarcinoma. Excessively large amounts of gonadotropic hormone are present in the blood and urine of patients with these conditions. The amount of anterior pituitary or gonadotropic hormone (Prolan) excreted in cases of hydatidiform mole is usually much greater than that excreted during normal pregnancy. The amount excreted in cases of choriocarcinoma is likewise far greater than in hydatidiform moles. Evans[5] states that from 100,000 to 520,000 mouse units per litre of urine have been reported in this malignancy.

In one fatal case recently reported the serum gonadotropic titer rose as high as 1,584,000 units per litre. This fact lead to the use of this test as a quantitative measure for the differentiation from normal pregnancy. In some cases, a quantitative test on diluted specimens of urine is possible even in dilutions as high as one to one hundred. It is now a well accepted fact that the pregnancy hormone tests are of distinct value in the diagnosis and prognosis of these conditions, and should always be used as a routine follow-up in all cases. A persistently high hormone titre after the evacuation of a mole is not conclusive evidence of choriocarcinoma since corpus luteum cysts of ovaries may be present, or the biologic test may remain positive from 4 to 6 weeks after a mole. But a persistently positive test after operation for choriocarcinoma makes it certain that tumor tissue is still present, either in the pelvis or in some distant organ, with obviously a very unfavorable prognosis.

It should be stated here that reports of proven cases of choriocarcinoma have shown that persistently negative hormone tests occur in a very small number of cases. Therefore, in such cases the positive diagnosis of this malignancy must rest on the microscopical findings. *The clinical and pathological study of each individual case should be combined with the pathological picture presented, and these in turn combined with the hormone studies and x-ray examination, in the proper follow-up and evaluation of metastases and in determining the prognosis in any case.*

The formation of bilateral lutein cysts of the ovaries is another frequent and suggestive finding in these patients, and may be added to the other

clinical data in making a diagnosis. However, when present these cysts may result in a persistently positive pregnancy test due to the excretion of the gonadatrophic hormone retained within the cysts.

The insidiousness of its development and the notoriously high degree of malignancy of this disease precludes any over-enthusiasm for any method of diagnosis or treatment.

TREATMENT

Early radical panhysterectomy while the tumor is still localized followed by deep x-ray therapy is the only treatment of value. Hysterectomy following metastases is rarely of benefit.

The routine treatment employed by Titus is preliminary irradiation with radium of 2400-3600 mgm. hours, followed by hysterectomy and adnexectomy in 1-4 weeks, and then a subsequent course of deep x-ray therapy.

This general policy is still followed by many gynecologists, while more recently, others have resorted to radiotherapy alone. While choriocarcinoma is considered a highly malignant disease, repeated observations of either spontaneous cures, or recovery after incomplete operation, even in the presence of metastases, have been reported. Also, it is known that the primary uterine tumor will in rare instances undergo complete regression, even though death occurs from metastases to other organs.

The apparent regression of metastases in the lungs and elsewhere which has been noted by various authors is a fairly large group of cases also presents one of the mystifying aspects of this tumor. No satisfactory explanation of these unusual facts has so far been presented.

Vaginal metastases should be excised freely, preferably by the electro-surgical cutting current, and followed by deep x-ray treatment.

Pulmonary and abdominal metastases can be treated by deep x-ray therapy, and since this tissue is particularly sensitive to irradiation, massive deep therapy should be undertaken at the earliest possible moment in the hope that the malignancy can still be combated.

The presence of a positive pregnancy test after removal of the uterus for choriocarcinoma indicates the presence of distant metastases, which should be located as soon as possible and treated by means of intensive irradiation.

Maier and Taylor[5] in 1947 reported an unusual case of recovery following treatment of metastatic choriocarcinoma of the lung by lobectomy, after unsuccessful radiotherapy of the lung fields. In their case, the Aschheim-Zondek tests became positive three years following removal of a hydatidiform mole and seven months following the finding of pulmonary metastases by x-ray. The day following lobectomy, the Aschheim-Zondek test was negative, and five weeks later a complete hysterectomy and bilateral salpingo-oophorectomy was performed and no evidence of primary tumor could be found in careful examination of the complete specimen.

They concluded that lobectomy is possible in only a small percentage of cases of pulmonary choriocarcinoma, and that although radiation therapy did not seem beneficial in this case, it should be used as a routine therapy.

Finally, it should be stated that regardless of the method of treatment, the prognosis is always grave, the mortality rate being about 80% in this disease, with death usually occurring within one year of onset. It should be emphasized that all suspected or proven cases of choriocarcinoma should be referred to the Albert-Mathieu Chorionepithelioma Registry for diagnosis and classification.

Case Report No. 1

M. B., a colored female, 49 years of age, para six, was admitted to the Lynchburg General Hospital on February 10, 1947, for operation. This patient was first seen on February 4 because of irregular vaginal bleeding and presented the following history and findings:

For the past two years, she had a recurrent amenorrhea of two to four months, accompanied by symptoms of the menopause, including increased nervous tension, insomnia, vertigo, and moderately severe hot flashes. The menstrual periods for October and November, 1946, did not appear, and in December, 1946, slight irregular vaginal bleeding began and continued at intervals for two months. No clots or tissue were passed and there was no lower abdominal pain or cramps. Examination revealed a firm,, smooth, pelvic tumor occupying the uterus and extending to several centimeters below the umbilicus. It was felt that the patient had a fibroid uterus, and in view of the size of the tumor she was admitted to the hospital for hysterectomy.

The past and family histories were negative. The patient had been separated from her husband several years. She had had six pregnancies, with four living children and two early spontaneous miscarriages.

Physical examination revealed a large obese and robust Negro woman in no pain. Temperature 99.2, pulse 80/min. There was a moderate amount of dental caries present. The abdomen was large,

obese and pendulous with multiple striae gravidarum. The heart and lungs were normal, B. P. 130/80. Pelvic examination revealed a relaxed pelvic outlet, but no cystocele or rectocele. The uterus was enlarged to the size of a four-months pregnancy, firm, smooth, and movable.

Laboratory study revealed a hemoglobin of 75%, red blood count of 3,880,000, white blood cell 8,600 and normal differential count. Catheterized urine showed 4-5 plus cells, occasional epithelial cells, with no albumin or sugar. The Wassermann Test was negative.

On admission to the hospital 500 cc. of citrated blood was given in preparation for operation and the usual pre-operative preparation of the bowels and genital tract completed.

On February 15, 1947, the abdomen was explored through a midline incision under general anesthesia. Examination of the pelvic organs revealed a large, firm uterus, the size of a four-months pregnancy, smooth in outline and of dark reddish-blue color in the lower posterior surface. The adnexal structures were normal, except for some induration and thickening in the bases of the broad ligament. Exposure of the pelvis was difficult due to its depth and the obesity of the patient. The uterus, both tubes and ovaries were then excised in the usual technique of supravaginal hysterectomy, and on opening the bases of the broad ligaments, there was encountered dark, hemorrhagic tissue lateral to the cervix, which had the appearance of hemangiomatous tissues. The uterus was then opened and found to contain a solid mass of dark, hemorrhagic grumous tissue, obliterating the entire uterine cavity and invading the myometrium almost to the serosal surface in many areas. Further search of the pelvic region revealed an elliptical mass of similar tissue protruding from the surface of the sigmoid colon approximately 7 cm. long and 3 cm. wide with enlargement of adjacent lymph nodes of the colonic mesentery. Approximately five inches of the colon was then resected, the distal portion being closed by inverting purse string sutures and the proximal end forming a permanent colostomy through the abdominal wall. The abdomen was closed in the usual manner after exploration revealed no abnormalities of the upper abdomen. 1000 cc. 5% glucose and 500 cc. of citrated blood were administered during the operation. Penicillin therapy was started immediately and the usual postoperative care for colostomy cases initiated.

Microscopical examination of the uterine tumor revealed large syncytial and Langhans cells invading the myometrium with marked necrosis and hemorrhage and complete destruction of the muscle tissues. No true chorionic villi were seen. The invasive pattern was very pronounced. Sections of this specimen were examined by Dr. Broders of the Mayo Clinic and a diagnosis of a highly malignant choriocarcinoma was confirmed. (Figure I)

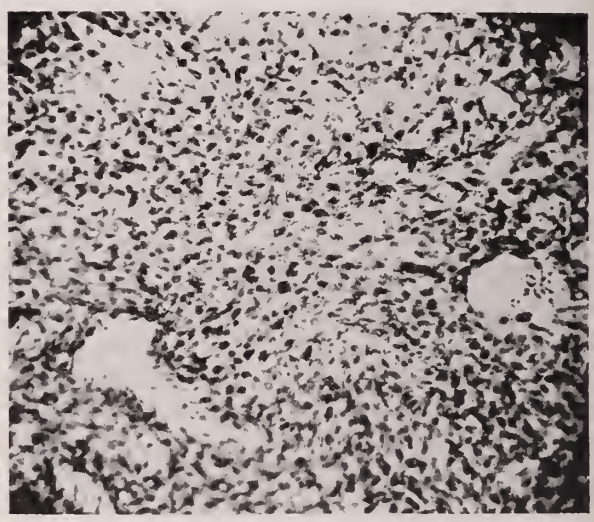


Fig. I—Photomicrograph

The Friedman's test on March 1, 1947, two weeks following operation, was negative. On March 3 x-ray examination of the lungs and skull was negative, except for an area of increased density about one inch in diameter in the central portion of the left lung, which was thought to represent a metastatic malignancy.

On March 4 or nineteen days following hysterectomy, 30 mgm. of radium were inserted into the cervical canal and vaginal fornicies by colpostat, and a total dosage of 2880 mgm./hours of irradiation was given.

The postoperative convalescence was uncomplicated and the colostomy functioned well. The patient was discharged from the hospital on March 12, the 32nd post-operative day, in fair general condition.

For follow-up study, the patient was re-admitted to the hospital on April 11, 1947, and the Friedman's test was again negative. The patient revealed loss of weight and beginning emaciation was evident. Re-examination of the lungs by x-ray showed multiple areas of metastatic malignancy in both lungs and the patient was then discharged with a hopeless prognosis, since irradiation of the lung fields did not appear to offer any hope in this case in the presence of such extensive pulmonary involvement.

Death occurred at home on August 16, 1947, six months following the original diagnosis.

This case is similar in several aspects to that reported by H. Acosta-Sison[6] in 1948.

Case Report No. 2

Mrs. R. T. G., a white married woman, 31 years of age, presented a past history which was interesting, unusual, and revealing. The first pregnancy in 1943 terminated in an incomplete abortion, and a dilatation and curettage was done. The patient remained in the hospital three weeks and continued to have pain and bleeding. She was then admitted to another hospital where an exploratory laporotomy was done because of intraperitoneal hemorrhage. A traumatic perforation of the uterus was found and repaired, and this was followed by another dilatation and curettement. Pathologic report of the tissue removed showed the presence of a hydatid mole and recovery at this time was apparently complete.

Five years later in 1948, the patient was again admitted to the Virginia Baptist Hospital at three and one-half months pregnancy following marked hyperemesis gravidarium, and at the time of this admission she again expelled a very large hydatid mole. Following this, another dilatation and curettage was done and pathologic report of the removed tissue confirmed the diagnosis. The condition of the patient became rapidly critical with the development of marked hypertension of 220/116, massive edema of the extremities, cardiac decompensation, severe jaundice and anemia, and acute pyelonephritis. After a very stormy convalescence the patient was discharged from the hospital on October 13 still showing jaundice, hypertension of 180/90, and large petechial hemorrhages of the skin.

The patient was again seen at the physician's office on October 28 at which time her blood pressure was 140/80 and pelvic examination revealed no apparent pathology. The patient returned for examination on December 17 and had continued to have irregular vaginal bleeding, and a Friedman's test and dilatation and currettage were advised. A Friedman's test on December 22, 1948, which was approximately three months after expulsion of the mole, was still positive. The patient was last seen on February 24, 1949, at which time the pelvis again was reported negative. The blood pressure was 134/70 and no further hormonal tests of pregnancy were carried out. The next examination recorded upon this patient was at the beginning of her present and final illness.

This patient was first seen by the author on October 29, 1951, with a history of amenorrhea of seven weeks duration, accompanied by tenderness of the breast and nausea. Examination revealed slight uterine enlargement and the diagnosis of early intrauterine gestation was made. One month later on November 26, 1951, the patient again reported to the office stating that the amenorrhea continued, along with the nausea and vomiting. Re-examination revealed a slight further uterine enlargement, but the size of the uterus seemed less than expected from the duration of the amenorrhea. Four days prior to her admission to the Virginia Baptist Hospital on December 12, 1951, the patient began to have rather sharp, severe cramping pelvic pain in the left lower quadrant, accompanied by slight vaginal bleeding but there was no evidence of the passage of any tissue. The pelvic pain increased so in intensity in spite of bed rest and sedation that hospital treatment and study became necessary.

On admission to the hospital the temperature, pulse, and respiration were normal. Pelvic examination at this time revealed an asymetrical enlargement of the uterus to the left with marked tenderness and moderate fixation on that side. The right adnexal region was negative and there was no bleeding present. General physical examination revealed moderate pallor of the skin and mucous membranes. The heart and lungs were normal on percussion and auscultation. The blood pressure was 110/60. The fundus of the uterus was just palpable above the symphysis pubic on abdominal examination, but there was no tenderness or ascites.

The pelvic pain increased in spite of heavy narcotic sedation and intravenous pyelograms on December 14, 1951, showed bilateral normal pyelograms with normal function with no evidence of ureteral obstruction. Laboratory study revealed the following: The urine analysis was negative. The sedimentation rate was 38 mm. per hour. The hemoglobin was 9.4 gms. (60%) and the white blood cells were 7,200 with normal differential count. The Wassermann test was negative.

Because of increasing pelvic pain which could not be controlled by narcotics an exploratory laporotomy under Sodium Pentothal anesthesia was performed on December 18, 1951, following the administration of two blood transfusions. Examination of the pelvic organs revealed slight asymetrical enlargement of the uterus with a dark bluish-purple mass extending from the left posterior surface of the uterus into the left broad ligament. The right tube and ovary were normal. The left tube and ovary

showed acute inflammatory changes with edema of the tube and adhesions to the left broad ligament. It was felt that this mass was probably malignant, and therefore a total hysterectomy and left salpingo-oophorectomy were done in the usual manner. Extending throughout the left broad ligament was a dark blue spongy tissue similar to that in the uterine wall, and it was then felt that this growth represented a choriocarcinoma.

Pathologic report of this tissue was as follows: "The uterus contains a friable hemorrhagic tumor in the muscular wall of the left lower half. The tumor covers an area of approximately two inches. It has broken through the outer wall and invaded the broad ligament, but *it does not penetrate* to the uterine cavity." Microscopic Diagnosis: *Choriocarcinoma.* (Figure II)

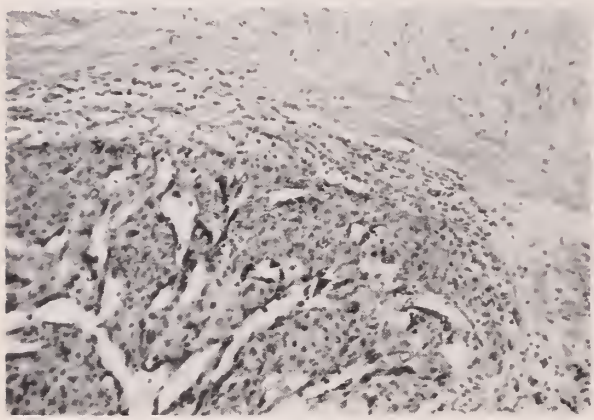


Fig. II—Photomicrograph

The post-operative course was very satisfactory. The temperature ranged from 98-100 until the sixth post-operative day. On December 21, 1951, (the third post-operative day) a Friedman's test was positive. On this same date x-ray of the lungs revealed small patchy areas of increased density in the bases of both lungs, which were thought to represent either an early pneumonic process, or more likely metastases to the lungs.

The operative incision healed without infection and the patient was discharged on the tenth post-operative day in very good general condition.

On December 31, 1951, deep pelvic x-ray therapy was instituted and a total dosage of 4,000 r's was given. It was necessary to admit the patient to the hospital on January 14, 1952, because of rather severe nausea resulting from the x-ray therapy and her last four treatments were given in to the hospital, at which time one blood transfusion was also given on January 19, 1952.

The final illness of this patient occurred on the morning of February 8, 1952, at which time the patient awoke at 3:00 A.M. with paralysis of the entire right side of the body. The patient lapsed into a semi-comatose condition and was admitted to the Lynchburg General Hospital in the afternoon with the following physical findings: The patient's head is turned to the left with a flattening of the naso-labial fold, and with paralysis of the right upper and both lower extremities. The knee-jerk reflexes were hyperactive and there were bilateral Babinski reflexes present. The pupils were equal and reacted to light and distance. There was no papilledema but a large exudate in the left fundus. On admission to the hospital the blood pressure was 200/100, pulse was 105/min., respiration 23/min., temperature was 100. The heart and lungs were normal and there was no cyanosis. Along the incision line of the abdominal operation were several palpable nodules about 1 cm. in diameter. Laboratory study showed no significant changes from normal.

In spite of intravenous glucose solution, the administration of penicillin, oxygen, and other supporting treatment the terminal course was rapidly down hill. The respiration became quite labored and the patient expired at 3:03 P.M. on February 9, 1952. Permission for post-mortem examination was denied by the family and the exact cause of death was not determined. However, death was thought to be due to a cerebro-vascular hemorrhage, although the possibility of cerebral metastases was considered.

SUMMARY

(1) Choriocarcinoma is a rare, highly malignant tumor, which arises in the chorionic tissue following some form of pregnancy, which metastasizes early, and is rapidly fatal.

(2) Early diagnosis is vital, and is accomplished by means of pathological tissue study, the use of the x-ray, and by the hormone pregnancy tests.

(3) The accepted method of treatment is panhysterectomy followed by irradiation therapy.

(4) The mortality is always high, approximately 70 to 80% in all cases.

(5) The prognosis is grave in all cases, especially in those with distant metastases.

(6) Two fatal cases of choriocarcinoma are reported. The first presented an extensive primary tumor, with metastases in the sigmoid colon, as well as the lungs, and which presented a persistently negative Friedman's test.

The second case apparently arose after a three-

year interval following the expulsion of a hydatid mole. Pulmonary metastases were present, but death probably occurred from a cerebral hemorrhage approximately two months after operation.

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Cervicodorsal Outlet Syndrome

Sewing pajama sleeves to the pajama coat and tying the wrist to the foot of the bed with a long piece of gauze were suggested as treatment for a disorder known as "cervicodorsal outlet syndrome."

Cervicodorsal outlet syndrome is an all-inclusive term referring to hand, arm, and shoulder symptoms resulting from pressure in the cervicodorsal outlet—the region in which the nerves and vessels leave the neck and thorax and are transmitted to the arm.

One of the commonest predisposing factors is the prolonged elevation of the arms, particularly sleeping with them above the head, Dr. Paul A. Nelson, Cleveland, said in the April 27th Journal of the American Medical Association.

To avoid this position, he recommended that the pajama sleeves above the elbow be sewed to the coat or that wrists be tied to the bedpost with a long piece of gauze. The gauze should be slack enough to allow the arms to move to all positions except above the head.

The syndrome occurs more often in women than in men and most frequently in the 20-to-40 age bracket. It is frequently found among persons engaged in such occupations as hairdressing, painting, construction work, and switchboard operation.

The symptoms of the common mild form include aching, pain, numbness, coldness, tingling, "pins and needles," weakness or a draggling feeling, usually in the inner side of the hand but occasionally in the arm, shoulder, chest wall, and neck. In more serious cases there may be changes in the appearance of the hand, weakness of certain muscles, and swelling near the base of the neck.

Predisposing factors include faulty anatomic development in the cervicodorsal outlet region; poor posture with drooping head; activities that force the shoulders out of their normal position (such as carrying a heavy pack on the back or pushing a wheelbarrow), and anxiety tension states.

Treatment usually consists of physical therapy, with surgery reserved for the few patients with very serious cases. Daily applications of heat and massage, and exercises to strengthen the shoulder muscles and to improve posture usually help within four to 12 weeks.

A Review of Cat Scratch Disease

Non-Bacterial Regional Lymphadenitis

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THE EARLIEST RECOGNITION of Non-Bacterial Regional Lymphadenitis as a definite disease entity is credited to Dr. Lee Foshay[11] of Cincinnati, who, during his classical study of tularemia, noted certain patients who presented a clinical picture similar to the ulceroglandular form of tularemia, but with diagnostic findings incompatible with this disease. A common history of being scratched by a cat prompted Foshay [18] to give this entity its colloquial title—Cat Scratch Disease. He recorded but never published his observations and knowledge of the disease remained a local matter until 1945, when Dr. F. M. Hanger[6] of New York developed suppurative lymphadenitis following a paronychia acquired while gardening. Hanger and Dr. F. M. Rose prepared a skin test antigen from the suppurative lymph node and this produced an intense skin reaction when injected into Hanger. Correspondence with Foshay[18] brought a question of cat contact and an affirmative answer prompted him to inform them of his earlier observations. The diagnosis was established after some of the Hanger-Rose antigen gave positive reactions in patients previously studied and skin tested by Foshay. Again the subject remained dormant until 1947 when casual conversation between Foshay and Dr. Robert Debre of Paris revealed that Debre had also observed cases in France similar to those in Cincinnati, and the French investigator returned to Paris with some skin test antigen which eventually established the common nature of the Cincinnati, New York and Paris cases. In 1950, Debre[9] published the first description of the disease under the title of "La Maladie des Griffes du chat", and this was followed in 1951 by the first case report published in the United States[15]. At the present time well over 500 cases may be found in the literature, with the extensive series of Debre and Job[8] in Europe and Daniels and MacMurray[7] in this country providing the most comprehensive reviews.

INCIDENCE

The incidence is world wide, cases having been reported from both Americas, Australia, Africa, Europe, India, and Hawaii[8]. There is no racial discrimination, and it can appear at any age. Over one-third of the cases occur in children under 10 years. Although a seasonal incidence has been denied, a review of 85 cases occurring in this country reveals a definite seasonal fluctuation with the greatest number of infections presenting between September and March. There is a peak incidence in December and a marked paucity of cases during the summer months. Most of the cases reported occurring in the summer are from the southern United States. The records of Foshay[12] correspond roughly with this observation.

The true incidence of Cat Scratch disease, or nonbacterial regional lymphadenitis (55-130) is difficult to determine since the limited supply of skin-test antigen makes actual diagnosis difficult. Suffice it to say that the incidence is greater than hospital records would indicate.

ETIOLOGY

A great deal of time has been expended in effort to establish the etiology of Cat Scratch disease, without any appreciable success. The most likely agent is a virus, possibly related to the psittacosis-lymphogranuloma venereum group since low complement fixation titers, against this group, are present in many cases[13]. To date, all efforts to demonstrate or culture this etiologic agent have failed. Mollaret[20] has successfully transmitted the disease from infected human lymph nodes to a species of Old World monkey, and to a human volunteer after several attempts. In all instances the skin test became positive, and clinical disease was produced; however, repeated attempts by other investigators have failed to reproduce these experiments. Therefore, at present, all that can be said is that the disease is infectious and the agent is probably a virus.

EPIDEMIOLOGY

The epidemiology has never been definitely determined since the etiologic agent cannot be demonstrated, but the history of cat contact in a majority of the cases would certainly tend to involve this

animal in the transmission of the disease. The domestic cat has been shown to transmit a number of diseases to man[15] for by sharing man's environment the cat serves as a potential reservoir and host for human as well as feline maladies. This role was emphasized by Daniel Defoe in 1772 when, in his "A Journal of the Plague Year," he wrote, "Wherefore, were we ordered to kill all the Dogs and Cats: But because they were Domestic Animals and are apt to run from House to House and from Street to Street, so are they capable of carrying the Effluvia or Infectious Steams of the Bodies infected, even in their Furrs and Hair", and he assures us that, "a prodigious Number of these Creatures were destroyed: I think they talked of forty thousand Dogs, and five times as many Cats, a few houses being without a cat."[19] Although the role of the cat is well established in plague, its precise part in the epidemiology of non-bacterial lymphadenitis remains undetermined. Cat contact has been shown by Debre and Job to be associated with 83% of their cases while Daniel and MacMurray[17] found cat contact in 93% of their cases. Actual cat scratch was present in only 54% and 56% of the cases respectively, while cat-bite was responsible for inoculation in very few cases. Thorns, bits of metal, chicken scratches, and miscellaneous abrasions account for a significant number of inoculations in both series; and a fairly large percentage had no known inoculation with or without cat contact. Some household epidemics, each associated with a cat, have been reported[7,8] and a small endemic has been reported[8] in a French village with a large cat population.

Thus it would appear that the much maligned feline is not fully responsible for transmission of the disease, although it plays a part in most cases. The actual role is almost definitely passive since repeated pathological studies and skin tests on cats involved in human cases have failed to indicate any infection[8]. Where the cat acquires the virus is a matter of conjecture. Almost every animal that the cat comes in contact with has been investigated[7] without demonstration of the virus. Foshay now believes that the human body may itself harbor the virus and that the cat scratch, as one of the most common skin lacerations, serves merely to provide a portal of entry[12].

CLINICAL APPEARANCE

The clinical appearance may be conveniently divided into two types.

(A) The typical case is usually characterized by a local lesion at the site of inoculation and regional lymphadenopathy without intervening lymphangitis. About one-half of the patients will develop the local lesion[13] which will consist of a scratch or papule. The scratch may be either diffusely or locally inflamed, scabbed, or healed to an indolent appearing purple or red scar; while the papule may be covered with a vesicle or pustule. The local manifestations will usually develop 3-4 days after inoculation, and the regional lymph nodes enlarge 1-6 weeks after this, attaining 1-5 cm. in diameter. A few of the nodes are merely enlarged but most are tender and inflamed. About one-third of the involved nodes will suppurate and can form fistulous tracts to the skin. Apparently any group of regional nodes can be involved, but most commonly only one local group is enlarged. When the cervical nodes are affected the appearance is strikingly similar to scrofula and it is interesting to speculate if cat-scratch disease might not account for the medieval scrofula cures attributed to the "King's touch."[6]

The general manifestations consist of a low-grade fever of variable course and duration, malaise, and other constitutional symptoms usually accompanying the lymphadenopathy. Occasionally a short-lived macular or papular rash is seen early in the course of the disease. More rarely, erythema nodosum may accompany the adenopathy[7,8,15]. Thrombocytopenic purpura has also been reported accompanying the lymphadenopathy in an otherwise typical case[3]. In general the patient is not acutely ill and the disease is self-limited. The lymph node enlargement lasts about six weeks, although adenopathy persisting up to two years has been reported[8].

(B) The atypical case differs from the typical one when the focus of infection involves a specific organ system.

(1) Nervous System Form: Central nervous system involvement has been reported in a number of otherwise typical cases[26]. The signs and symptoms vary to a great extent, but are basically those of encephalitis or meningitis. The spinal fluid is always sterile and findings are within normal limits with the possible exception of an occasional lymphocytosis. The course is benign and usually ends in spontaneous recovery within a few days. The CNS involvement would appear to be related to the aseptic meningitides[24], although inability to demonstrate the etiologic agent is a barrier to definite identification.

(2) Ocular Form: Since 1889 there has been clinical recognition of the so-called Parinaud's Oculo-glandular Syndrome of conjunctivitis and regional lymphadenitis. Now it appears that the

agent responsible for this syndrome in the great majority of cases is the Cat Scratch virus[4,10] with a very few due to tuberculosis, syphilis or Leptothrix. The site of inoculation is apparently the conjunctiva which responds with a granulomatous conjunctivitis accompanied by typical local adenitis.

(3) Oro-pharyngeal Form: Several cases have been reported of antibiotic resistant angina and pharyngeal abscess followed by regional lymphadenitis which, when suppurative, produced a sterile pus. Intradermal tests with Cat Scratch antigen were positive[7,25] and a mucosal site of inoculation is probable with angina as its local manifestation.

(4) Pulmonary Form: One case has been described in which enlargement of the mediastinal lymph nodes and pulmonary infiltration occurred, and a positive reaction was obtained with Cat Scratch antigen[25]. The course of this case was benign, the mediastinal nodes receding spontaneously over a four week period while the infiltrate regressed more slowly. Again a mucosal portal of entry is postulated with the area of infiltration the site of inoculation. Diagnosis in this instance was based on a positive skin test and intimate cat contact.

(5) Mesenteric Form: A number of instances have been reported[25] in which laparotomies were performed on patients suspected of having acute appendicitis. The appendices were found to be normal but the mesenteric lymph nodes were enlarged and inflamed. Examination of these nodes under the microscope revealed a histologic picture compatible with Cat Scratch disease, and an intradermal test was positive in all instances. The history of cat contact without actual scratches was elicited and a mucosal site of inoculation was theorized. The existence of a mesenteric form brings up the question of its relationship to the "non-specific mesenteric lymphadenitis" commonly seen in children. Intradermal testing of these children with the Cat Scratch antigen might provide interesting data on the etiology of mesenteric lymphadenitis.

(6) Pseudo-venereal Form. Cases so called do not really deserve to be called atypical forms as they are merely typical cases with inguinal lymphadenitis closely resembling lymphogranuloma venereum. In fact this resemblance is so pronounced that mistakes are easy to make in the absence of skin testing. One such case[2,23] occurred on board ship when a young lady, who was returning to France from the Orient, developed inguinal lymphadenopathy, diagnosed by the ship's doctor as atypical bubonic plague. This diagnosis was hastily revised to lymphogranuloma venereum some few days later when a fellow passenger, an engineer, developed a similar clinical picture. Despite the spirited protestations of the patients to the contrary, the natural epidemiology of the disease was assumed by all, including the engineer's wife; and a reference by the doctor to "la doucour des nuits de l'Ocean Indien" did not ease the situation. Upon their arrival in France, negative Frei tests stimulated further investigation and revealed common cat contact and scratches. Positive intradermal tests with cat-scratch antigen vindicated both parties.

(7) Other Reported Forms: In addition to those forms already described various other clinical manifestations have been attributed to Cat Scratch disease, but for various reasons their relationship has not been fully established. Acute thyroiditis has been described in conjunction with what would appear to be a typical case of the disease[22], but unfortunately no skin test was done. Another example is non-specific urethritis[28,29] in which several patients gave positive skin tests to Cat Scratch antigen, but again the relationship of the two diseases has not been fully established. One case associated with hepato-splenomegaly and another with an osteolytic lesion have been described.

In discussing the clinical picture of this disease, reference should be made to the appearance of positive skin tests in individuals who can recall no clinical disease. This circumstance has led to the postulation of an "inapparent" form[8] of the disease; however, most evidence points to the existence of a trivial rather than inapparent form, in which the disease was so slight as to go unnoticed and yet impart sensitivity to the individual. This theory is strengthened by the fact that most patients appear in very little distress during the course of the disease and the illness may go unrecognized. The low incidence of positive skin tests in control groups probably indicates a relatively high resistance by man to the infection.

DIAGNOSIS AND THE INTRADERMAL TEST

The diagnosis of Cat Scratch disease can only be safely arrived at when the intradermal test is positive in conjunction with a clinical picture characteristic of the disease as outlined. When atypical forms present, the diagnosis should be made only after very extensive investigation. A lymph node biopsy revealing a microscopic picture characteristic of the disease is a valuable adjunct to the diagnosis, especially in the atypical forms. The differential diagnosis should include lymphoma, tuberculosis,

tularemia, brucellosis, lymphogranuloma venereum, mycotic lesions, bacterial adenitis, and other processes that produce lymphadenopathy. Routine laboratory procedures are of relatively little value. The leukocyte response is usually normal or slightly elevated with a normal differential: the erythrocyte sedimentation rate is often increased slightly.

The intradermal test is based on the same principle as the Frei test in that bacteriologically sterile pus from a proven case of Cat Scratch disease is used to prepare an antigen solution. The actual test is carried out by injecting 0.1 ml. solution intradermally and a positive reaction is any definite area of induration and/or erythema at the site of injection. This reaction should appear in 36-48 hours but may rarely be delayed for 6-7 days.

The test is believed to possess a high degree of specificity for Cat Scratch disease. A series[17] of 250 patients presenting with lymphadenitis of undetermined origin, and 94 normal controls were tested producing only 25 negative results among the patients, all of whom were later shown to be suffering from a variety of other diseases. There were 3 positive reactions in the control group but these three individuals all gave history of long and intimate cat contact. Evidence that purports to establish the cross reactivity of the antigen solution is inconclusive, and the intradermal test remains the most specific and sensitive indication of the disease. Sensitivity, once acquired, will apparently remain for many years. A positive skin test has been reported[21] in a physician who had signs and symptoms that resembled a case of the disease 25 years before. The intradermal test is the most valuable diagnostic tool available. A more definite diagnosis awaits the development of a serologic test in which increasing titers could indicate the activity of the disease.

PATHOLOGY

Both the skin lesion and involved lymph nodes show granuloma formation with typical pathological findings. The lymph nodes vary on cut surface sometimes appearing grayish-red and homogenous, sometimes showing scattered areas of necrosis, and on other occasions revealing only a suppurative sack. Microscopically the granulomatous process replaces the normal architecture of the node with lymphoreticular hyperplasia. Typically in the well developed node, there is a follicular structure with a lympho-plasmocytic peripheral circle, an area of epithelioid cells scattered with Langhans'—type giant cells, and a necrotic center. If there are more than one of these follicles present in a node, they may coalesce. This picture is not specific for Cat Scratch disease but it is characteristic and, therefore, may be of value in the diagnosis.

Special staining techniques have revealed the presence of very small granular corpuscles within the cells of the involved tissue[20] and these have been identified as evidence of viral infestation and of diagnostic aid; however a careful study[29] of similarly stained tissue from proven cases of other diseases, both viral and bacterial, has shown that these corpuscles are found in a variety of diseases, and thus their presence is of no specific significance.

THERAPY AND PROGNOSIS

The treatment of Cat Scratch disease with antibiotics has been usually without response, although there is some evidence that chloretracycline[7,8] and chloramphenicol[7] when given early, may shorten the course of the disease. Incision and drainage of involved nodes has been suggested[8] as a method for shortening the course, in conjunction with antibiotics. Corticotropin has been reported[3] to speedily dissolve infected nodes, in doses of 40 mg. every 6 hours for one week. Radiation of involved nodes apparently has had an adverse effect in the one case in which it was used[30]. The prognosis would appear to be excellent, since with only one exception, all reported cases have had complete recovery. The one exception was a case in which the death of a child was attributed to Cat Scratch disease; however, there was inadequate evidence presented to support this assumption[14]. This does not mean that fatal cases cannot or will not appear, especially with central nervous system involvement.

SUMMARY

(1) Non-bacterial regional lymphadenitis, commonly referred to as Cat Scratch disease, is characterized by an infected local lesion and regional lymphadenitis without lymphangitis.

(2) There is a definite seasonal increase in the incidence with most cases occurring in winter months.

(3) The etiologic agent is believed to be a virus, but all attempts to demonstrate the virus have failed.

(4) Transmission is associated with cats in most cases, but the actual epidemiology is unsettled.

(5) Typical as well as atypical cases do occur as described.

(6) The diagnosis is based on the presence of a positive intradermal test on a patient who has an associated characteristic clinical picture, and in whom other causes of regional lymphadenopathy

have been eliminated. The intradermal test is believed to be highly specific.

(7) The characteristic pathological picture is that of granuloma formation in the skin lesion and lymph nodes.

(8) The treatment is unsatisfactory but the disease is apparently benign and self-limited; however, the possibility of fatal infections cannot be excluded.

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Clinicopathological Conferences

Of The Medical College of Virginia Hospital

Prepared and Edited by

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Case #191 (A19121)

A 15 YEAR OLD colored female was first admitted to St. Philip Hospital on May 1, 1956. She had appeared in the Dermatology Section of the Out-Patient Department in February, 1955, at which time she exhibited a "maculopapular lichenified" eruption on the right hand, arm, and at the left corner of her mouth. Her serology was weakly positive. She was given non-specific topical therapy and did not return to the Clinic until one year later, in February, 1956. At this time she showed a "typical lupus rash" over the nose, face, and forehead. Her serology was still positive (1-2) and a concentrated peripheral blood smear was positive for L.E. cells. The patient's only complaints were of itching and soreness of the skin in the involved areas. Several days before admission to the hospital she noted some swelling of her face and hands. She vaguely recalled some pain in her left knee.

She had been operated upon in 1951 for an acute abdomen and was found to have a gangrenous paraovarian cyst. The past history was essentially negative.

Physical Examination: Weight 100. B. P. 140/90-95. Pulse 90. Respiration 16. Temperature 97.8. There were erythematous maculopapular lesions in a butterfly distribution over the nose and malar eminences with similar lesions on the forehead, both arms, and right hand. The lesions were somewhat scaly at the margins. The hands and face were puffy. There was a single, fluffy, bluish-white exudate near the disc in the left fundus. There was generalized lymphadenopathy—small, firm, nontender nodes, most prominent in the posterior cervical chains. The heart was normal, the lungs clear, and the remainder of the physical examination essentially negative.

Laboratory Data: Hgb. 10.5 grams, RBC 3,500,000, WBC 6,200 with 60% polys., 5% eosins., 33% lymphs., and 2% monos. The urine was alkaline, sp. gr. 1.020, 3+ albumin, 10-15 RBC, many WBC, and many casts. Peripheral blood smear again showed many L. E. cells, as did the sternal marrow. Serum proteins 5.4 grams %, albumin 2.9, globulin 2.5. Serum bilirubin, electrolytes, blood sugar, and BUN were all normal. An electrocardiogram showed indeterminate ST and T wave changes in all leads. Chest x-ray revealed clear lung fields and a normal heart shadow. Blood serology again weakly positive. Spinal fluid negative.

The patient continued to run from 2-3+ albuminuria. Her hospital course was otherwise uneventful. She was given 2.4 million units of benzanthine penicillin G as a single dose, started on Prednisone, 5 mgm. 4 times a day, iron, and ascorbic acid, and discharged to the Out-Patient Clinic.

The rash seemed to improve slightly at first. The patient then began to complain of abdominal tightness and intermittent epigastric pain not relieved by food. She continued to have some edema of the hands and face, and began to develop mild pedal edema. Salt was restricted and Prednisone increased to 10 and then 15 mgm. 4 times a day without noticeable benefit. The patient continued to run albumin, red cells, and casts in the urine. The hemoglobin dropped slightly and stools were positive for occult blood. A G-I series on May 31, 1956, was essentially negative (patient could drink only half the desired amount of barium and could be examined only in the recumbent position). On this same day she was readmitted to the hospital.

Physical Examination: Weight 108. B. P. 130/100. Temperature 100 (R) pulse 100. The patient was rather lethargic with mild edema of the face, hands, and ankles. The rash was essentially unchanged. The liver was noted to be palpable one finger below the right costal margin and there was definite diffuse epigastric tenderness without palpable masses, distention, or ascites. The physical

examination was otherwise not remarkable and unchanged over the previous admission.

Laboratory Data: Hgb. 9.0 grams, WBC 13,200, polys. 72, lymphs 25, monos. 3. Urine, sp. gr. 1.020, 3+ albumin, frequent red cells, few WBC, and occasional casts with many bacteria. Serum anylase less than 50 S. U. Cephalin flocculation 4+. Thymol turbidity 1 unit. Total proteins 4.6 grams %, albumin 2.0, globulin 2.6. Bilirubin normal. BUN 70 mgm. %. Creatinine 3.0. Several blood cultures were negative. Urine culture revealed A. aerogenes, sensitive to tetracycline, streptomycin, chloramphenicol, and Furadantin. Following admission the patient was placed on a low-salt diet, Prednisone 10 mgm. q 8 hours, Furadantin, 100 mgm. t.i.d., iron, ascorbic acid, and multiple vitamins. On the morning of the third hospital day the patient had four generalized convulsions, following which her temperature spiked to 104° (R). She was then started on Dilantin and penicillin. She had no more seizures, but her temperature remained elevated between 101 and 102° (R) with a pulse rate of around 120. She continued to complain of abdominal pain and was started on a Sippy diet. Prednisone was increased to 10 mgm. every six hours. On the evening of the eighth hospital day the patient had a brief period of apnea—she recovered, but ten minutes later had another period of apnea during which she became quite cyanotic. Blood pressure fell to 50/30. She then began to breathe with irregular gasping respirations. Oxygen, adrenalin, and coramine had no appreciable effect and the patient expired at 5:45 p.m. on the 8th hospital day. An autopsy was performed.

CLINICAL DISCUSSION

Dr. H. St. George Tucker, Jr.*: There seems to be no doubt that this is a case of systemic lupus erythematosus. This 15 year old girl was first observed to have a rash on the right arm and on the face in February 1955, fifteen months before the present admission. At that time her blood serology was weakly positive. A year later she was seen again in the clinic and this time had a "typical lupus rash" over the nose, face, and forehead. There was some itching and the face and hands were swollen. The concentrated peripheral blood smear was positive for L. E. cells. A rash on the face resembling the butterfly eruption of systemic lupus is occasionally seen in other diseases, but the L. E. cell phenomenon is considered highly specific for systemic lupus by all who have had wide experience with this test. The test depends on the occurrence in the plasma of patients with lupus, of an abnormal type of globulin, which is capable of entering into damaged leukocytes and causing disintegration of the nucleus and disruption of the cell. The disintegrated nuclear material, containing desoxyribonucleic acid, is then phagocytized by healthy leukocytes, forming the inclusion body of the so-called L. E. cell. The phenomenon is thought not to occur in vivo, presumably because the intact leukocytes of the circulating blood are resistant to the entry of the abnormal globulin. When blood is removed from the body, some of the leukocytes are damaged and become vulnerable to entry of the globulin. The extent to which the phenomenon occurs is increased by allowing the blood to clot, or by shaking it with beads, both procedures increasing the number of damaged and vulnerable leukocytes. The positive L. E. cell test in this patient, together with a rather typical history and subsequent course, clearly establish the diagnosis of systemic lupus. There is really no differential diagnosis to be considered. The positive blood serology is undoubtedly the biological false positive that is so often seen at systemic lupus. This can be differentiated from the true positive serology of syphilis by carrying out the T.P.I. or treponema immobilization test which is positive in syphilis and negative in other conditions. It is noteworthy that the biological false positive serology may be one of the earliest manifestations of lupus and may antedate the other manifestations of the disease by many years. It has been proposed by Moore and others that the test may be used as a screening test to pick up cases of possible lupus before clinical symptoms appear.

The history given by this patient, and her subsequent course, are fairly typical of systemic lupus. She seems to have had little evidence of joint involvement, which is usually a more prominent feature of the disease. Many cases are indistinguishable from rheumatoid arthritis until evidence of the disease in other body systems appears. The patient only vaguely recalled some pain in her left knee.

The past history of removal of a gangrenous paraovarian cyst in 1951, when she was 10, seems a little unusual. One is reminded of the frequent association of dermatomyositis, another collagen disease, with abdominal tumors, particularly of the ovary. However, the clinical picture here is definitely that of lupus and not of dermatomyositis, so the history of the abdominal tumor is probably fortuitous. At this point it might be well to state that

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while there may be some overlapping of symptomatology as well as of the pathologic lesions found, in the various collagen diseases, nevertheless we consider all these diseases as clinically distinct and separable. Occasionally a collagen disease will present features of two or more diseases so that differentiation may be difficult, but for the most part each of these conditions has its own quite characteristic clinical picture and nothing is accomplished by lumping them all together.

It is a little unusual that this patient did not show any fever until shortly before death and then complications may have been present. Fever is usually a feature of active exacerbations of systemic lupus.

This patient showed a definite hypertension. This is not usually seen in lupus except where advanced renal disease is present. The subsequent findings clearly indicate that advanced renal involvement was present here, with a nephrotic syndrome, which is a common feature of lupus. The edema of the face and hands is most likely associated with the hypoproteinemia, although it does occur as part of the inflammatory process in the subcutaneous tissues, similar to the edema of dermatomyositis.

The description given of the skin rash is typical of that of lupus. The fluffy exudate seen in the left fundus is one of the characteristic retinal findings, along with other evidence of vascular damage such as narrowed vessels, hemorrhages and sometimes papilledema. The generalized lymphadenopathy found is common in lupus. Examination of the heart and lungs was negative, with nothing to suggest the pleural, pericardial or endocardial lesions often found in this disease.

The laboratory data show a moderate anemia and an essentially normal white count on the first admission. The white count is either low or normal in systemic lupus, but may be elevated in the presence of secondary infection or other complications. The urine here shows hematuria and heavy albuminuria, common findings in lupus, with still a good concentration with specific gravity 1.020. This suggests an advanced degree of glomerular damage with tubular function still relatively intact. The serum albumin is repeatedly low as part of the nephrotic syndrome. It is rather surprising that the serum globulin is not higher, as it usually is in lupus. The electrophoretic pattern would very probably have shown an increase in the gamma-globulin fraction.

The diagnosis of systemic lupus was quite obvious to her physicians, and treatment was begun with prednisone. It might be mentioned that this type of case of systemic lupus, with the nephrotic syndrome, has been shown to respond fairly often to treatment with intravenous nitrogen mustard, a good diuresis being often produced. The mode of action of the nitrogen mustard is not clear. It has no effect on the underlying disease itself. It would certainly seem preferable to give prednisone first, as was done here, since where remission can be produced by adrenal steroid treatment, the improvment is much more fundamental than the diuresis accomplished by nitrogen mustard. The latter type of treatment might well be held in reserve, to be used if prednisone fails. It is not clear why this patient was given penicillin. Perhaps it was given as prophylaxis against any secondary infection that might be masked by prednisone. In general, however, we prefer to abstain from any unnecessary antibiotic administration in patients with these hypersensitivity diseases, since so many react to such medications.

The patient was discharged and followed in the clinic. She improved slightly. She began to complain of abdominal tightness and intermittent epigastric pain. Increasing the prednisone dosage did not help. It was suspected that an ulcer may have developed as a result of prednisone treatment, and a gastrointestinal x-ray was taken. This was reported as negative, but the films were taken under difficult circumstances, and I am told that review of the films has raised some question as to a possible lesion.

The patient was hospitalized again. The physical findings were about as before except that there was definite diffuse epigastric tenderness without palpable masses, distention, or ascites. The laboratory data showed some progression in the anemia, and now a mild leukocytosis of 13,200. The rise in the white count may be a result of the prednisone, or it may be compatible with some complications such as infection. The urine still shows 3+ albumin with frequent red cells. The BUN has risen to 70 mg%, but some of this rise is undoubtedly due to pre-renal deviation of fluid into edema rather than indicative of extreme impairment of kidney function. The cephalin flocculation of 4+ is undoubtedly associated with the presence of abnormal serum globulins as part of the lupus, and cannot be construed as evidence of impaired hepatocellular function. The other liver function tests are essentially normal. The serum amylase is less than 50 units. This would seem to lead us away from pancreatitis as the cause of the abdominal pain.

Prednisone was continued and furadantin was given, although there is little reason to suspect a

urinary infection as the cause of her abdominal discomfort. On the third hospital day the patient had several convulsions, and thereafter ran a definite fever. Dilantin and penicillin were given and the prednisone dosage was increased. The patient did not improve, and on the eighth hospital day had several periods of apnea followed by circulatory collapse, irregular gasping respirations and death. It seems evident that the death was a cerebral one with progressive interference with the medullary respiratory centers.

We have then a young girl with advanced systemic lupus, who, while on prednisone treatment developed intractable upper abdominal pain and discomfort, then began having convulsions and died a cerebral respiratory death.

First let us consider the usual causes of death in systemic lupus. The three commonest causes of death are renal insufficiency, cerebral damages, and secondary infection. This patient had obvious renal and cerebral damage, and may have had extensive infection, masked by prednisone. However, the degree of renal insufficiency in this patient was not enough to cause death, and the mode of exodus was clearly cerebral. A very real question can be raised as to whether this patient may have had a complicating infection of the central nervous system. We have seen both tuberculous meningitis and torula (cryptococcus) meningitis as complications developing in patients made hypercorticoid by adrenal steroid treatment. We would like to know what the spinal fluid showed in this patient. Convulsions are a very common symptom in cerebral lupus itself, often having their onset after adrenal steroid therapy. In the absence of any definite indication of a complicating cerebral infection, I would favor the opinion that the convulsions were a manifestation of cerebral lupus itself without other complications.

Now we must consider the question as to whether this patient had a duodenal ulcer. Abdominal pain such as she had can occur from lupus itself as a result of tiny vascular lesions and resulting ischemic necrosis in the abdominal viscera, or of patches of localized peritonitis similar to the pleuritis and pericarditis which are common in this disease. The entire picture may be due to the lupus itself However, abdominal pain is not a very common symptom in lupus. It is far more common in polyarteritis nodosa where larger sized vessels are involved, and the more sizeable visceral infarctions very frequently cause pain. The occurence of peptic ulceration under prednisone treatment has been demonstrated many times, and often perforation or hemorrhage may occur with the usual symptoms masked by the effects of the steroid. It is impossible to be certain in this case but because of the rather protracted and unrelenting course of this patient's abdominal pain, and the epigastric tenderness repeatedly noted, I believe that this patient had a duodenal ulcer, and that it may have perforated. The rise in the white blood count might reflect such a complication. There are other possible explanations for the abdominal pain, such as a pancreatitis, or vascular damage within the liver or spleen or some other abdominal organ. In the absence of any more specific evidence for any of these, I would favor a duodenal ulcer.

Dr. H. St. George Tucker, Jr.'s Diagnosis

1. Systemic lupus erythematosus with advanced renal and cerebral damage, the latter being the cause of death, and

2. Duodenal ulcer resulting from prednisone administration, with possible perforation.

Pathological Diagnosis

Disseminated lupus erythematosus involving the kidneys in the form of acute glomerulonephritis.

Mitral valvulitis manifested by Libman-Sacks nonbacterial verrucae and focal myocarditis.

Severe, diffuse, ischemic necrosis of pancreas following lupus vasculitis with thrombosis.

Verrucal angionecrosis of capillaries of myocardium, kidneys and brain—leading to glomerulonecrosis and disseminated focal encephalomalacia.

DISCUSSION OF PATHOLOGIC FINDINGS

Dr. Gordon Hennigar*: On external examination of the body an erythematous rash was noted over the bridge of the nose and on the malar prominences. There was moderate pitting edema of the lower extremities. A few small lymph nodes were palpable in the axillae.

On entering the body cavities, generalized serous effusion was found: ascites 1000 cc., hydrothorax 250 cc. each and hydropericardium 50 cc. The fluid was clear and amber colored. The serous membranes were smooth and glistening and showed no evidence of serositis grossly or microscopically.

The heart weighed 250 gm. and showed slight left ventricular hypertrophy. On the basis of the appearance of the heart, we do not feel that this patient suffered from any particular degree of hypertension for a long period of time. Hypertension in systemic lupus erythematosus is becoming rather common since

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the modern therapy has prolonged the life of lupus patients, hence permitting more scarring of the diseased glomeruli. There is quite a good correlation between the degree of glomerular scarring or obsolescence and the height of the diastolic pressure. In the case today we were impressed with acute necrotizing glomerulonephritis manifested by abundant hyalinfibrinoid material with numerous polymorphonuclear nephritis and a few hematoxylin bodies. This appearance was the morphological manifestation of a very acute and violent reaction in the kidney. Experience has shown us that with acute widespread glomerular destruction, acute hypertension and renal insufficiency develop. Libman-Sacks in 1924 described a valvular and mural endocarditis which they termed atypical verrucous endocarditis. There were peculiar valvular and mural lesions which differed in morphology and localization from that encountered in acute bacterial endocarditis, endocarditis lenta, and rheumatic endocarditis. These vegetations were free from demonstrable microorganisms and attempts to grow bacteria from the blood proved unsuccessful. Because of the unusual character of the endocardial lesion and the presence of the verrucae the cases were designated "atypical verrucous endocarditis". Among their 4 cases the tricuspid and mitral valves were involved 4 times, the pulmonic and aortic each twice, the mural endocardium of the right atrium was involved twice, that of the right ventricle once, of the left atrium once, and of the left ventricle twice. The vegetations on the mitral valve were situated for the most part on the line of closure but extended generally below and above the latter and also involved the free margins. The individual verrucae measured from 1 to 4 mm. in diameter and had in places a rather broad attachment to the valve. In each case the inflammatory process had spread from the ventricular aspect of the posterior leaflet of the mitral valve and the line of attachment of the latter, downward along the mural endocardium of the posterior wall of the left ventricle. The lesions on the tricuspid valve were smaller than those affecting the mitral valve. Isolated areas of mural endocarditis were found quite commonly. In the case presented here today the small 1 to 2 mm. verrucae were found near the base of the posterior leaflet of the mitral valve. They were demonstrable on both the atrial and ventricular surfaces. The adjacent mural endocardium was involved (Fig. 1). The other valves had clean cusps. There was no evidence of mitral stenosis. Chordae tendineae and papillary muscles which are sometimes involved by conglomerates of



Fig. 1—A low power microscopic view of the mitral valve showing the verrucous vegetations on the auricular surface of the valve cusp and on the mural endocardium of the left ventricle.

mulberry-like excrescences were free in this case. Microscopically, the vegetations consisted of masses of fibrin and fibrinoid, and at the base of the verrucae the mitral valve showed areas of necrosis with infiltration with acute and chronic inflammatory cells. No bacteria can be demonstrated in the lesion. The Libman-Sacks lesion when confined to the valve cusps alone may be indistinguishable from the verrucae of rheumatic fever. These lupus verrucae have been described as occurring in 20-60% of cases of acute lupus erythematosus. We have seen it 3 times in 15 cases—20%. The myocardium showed numerous arterioles which were occluded by hyaline thrombus-like material. Many of these hyaline thrombi were adherent to the wall and covered by a layer of endothelium (Fig. 2). These findings are indistinguishable from those seen in thrombotic thrombocytopenic purpura, another collagen vascular disease. In a few places of the myocardium, there was some perivascular fibrosis and focal proliferation of fibroblasts mimicked Aschoff nodule of rheumatic fever (Fig. 3).

The lungs were slightly emphysematous and showed no specific findings such as hyaline membrane formation, focal necrosis of the alveolar walls and capillary thrombosis, that are sometimes found in

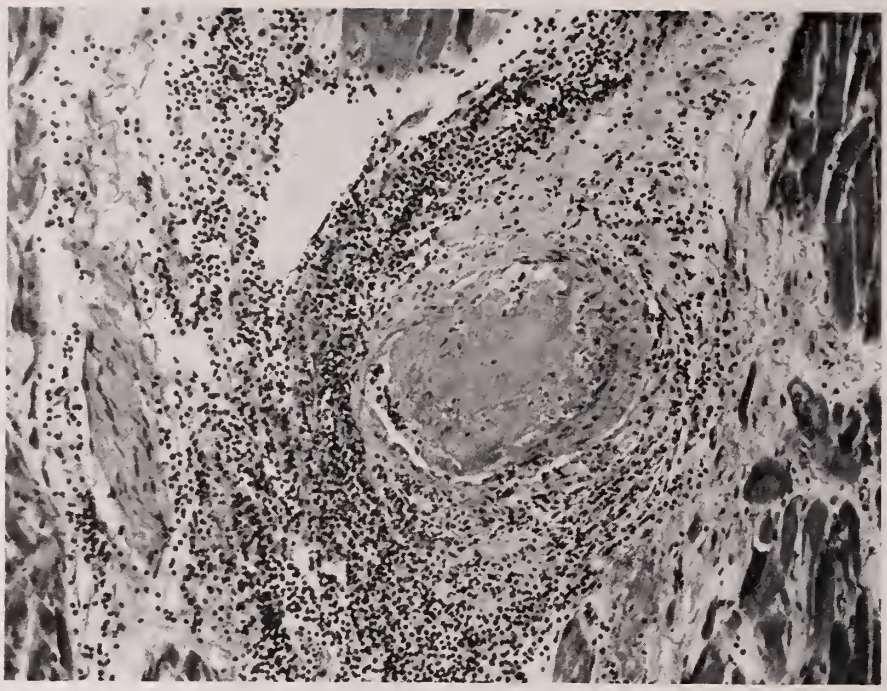


Fig. 2—Hyaline thrombus material in the lumen of a small artery in the left ventricle. The thrombosed vessel is surrounded by a dense inflammatory infiltrate in which polymorphonuclear leukocytes predominate.

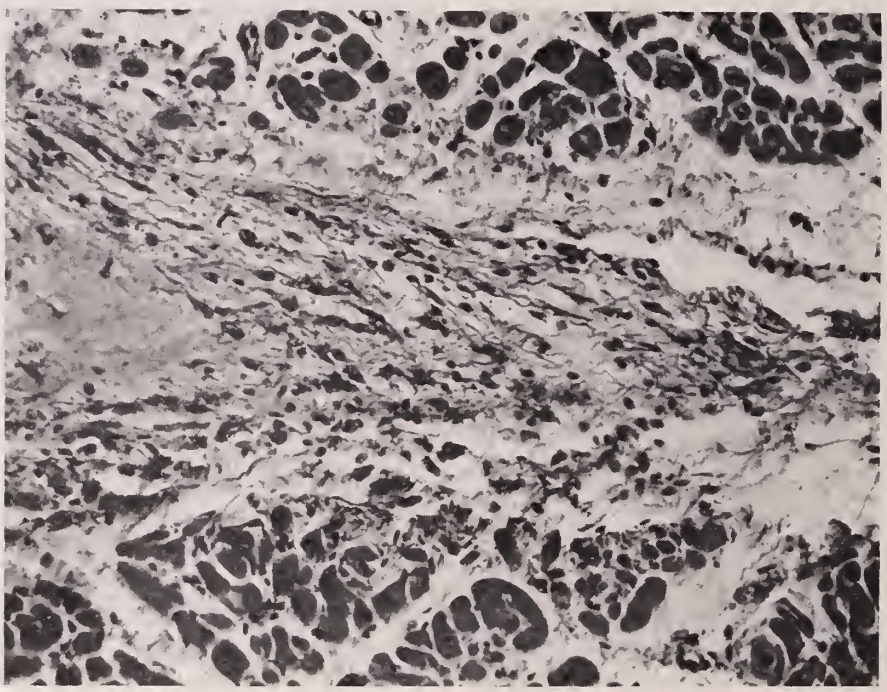


Fig. 3—Perivascular fibroblastic proliferation in the left ventricular myocardium.

systemic lupus erythematosus, rheumatic pneumonitis, periarteritis nodosa and anaphylactic pneumonitis.

The liver weighed 1400 gm. and showed no pathological findings of interest. The spleen weighed 125 gm. and was grossly unremarkable. Periarterial fibrosis of the central arteries, which is presumed to be pathognomonic for systemic lupus erythematosus when pronounced, was only minimal.

The pancreas was definitely enlarged and edematous, and many large areas of hemorrhage and necrosis were noted grossly. Histological examination revealed marked fibrinoid necrosis of the walls of many arteries and thrombotic occlusion of their lumina (Fig. 4).

The kidney weighed 200 gm. each and showed

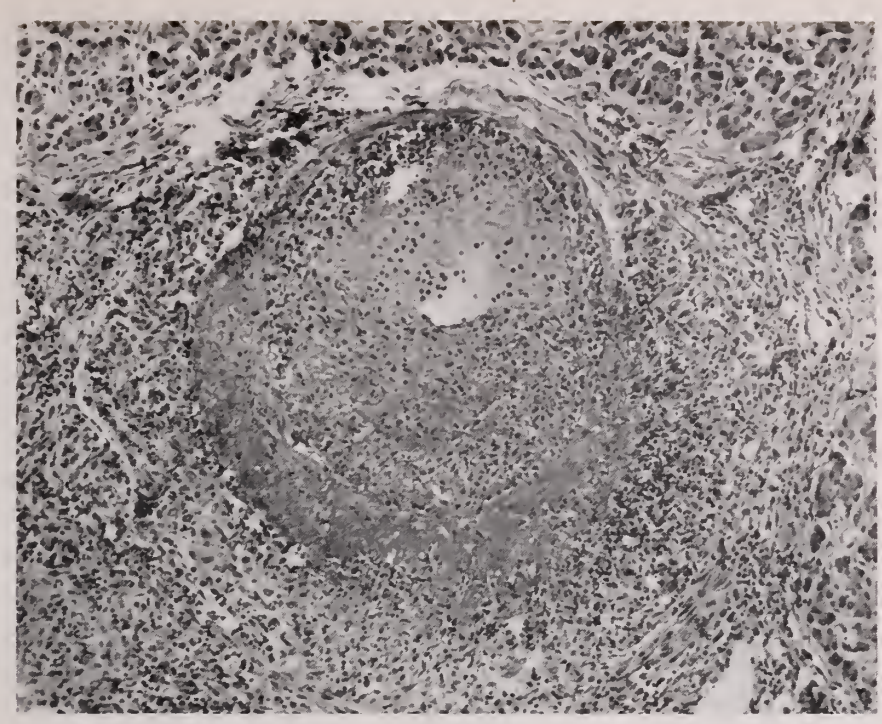


Fig. 4—An artery in the pancreas showing intense fibrinoid necrosis of the wall and occlusion of the lumen by hyaline thrombus material.

numerous hemorrhagic spots in the cortex. Microscopically these hemorrhages were found to be due to fibrinoid necrosis and hyaline thrombosis of many small arteries and arterioles with resultant hemorrhagic infarction of many glomeruli and tubules. Other glomeruli showed markedly increased cellularity due to proliferation of both epithelial and endothelial cells and exudation of polymorphonuclear leukocytes, the typical findings in acute glomerulonephritis. Some other glomeruli showed fibrinoid necrosis of the capillaries and hyaline thrombi, a picture similar to that found in embolic glomerulonephritis following bacterial endocarditis (Fig. 5). The tubular epithelium was swollen and the lumina

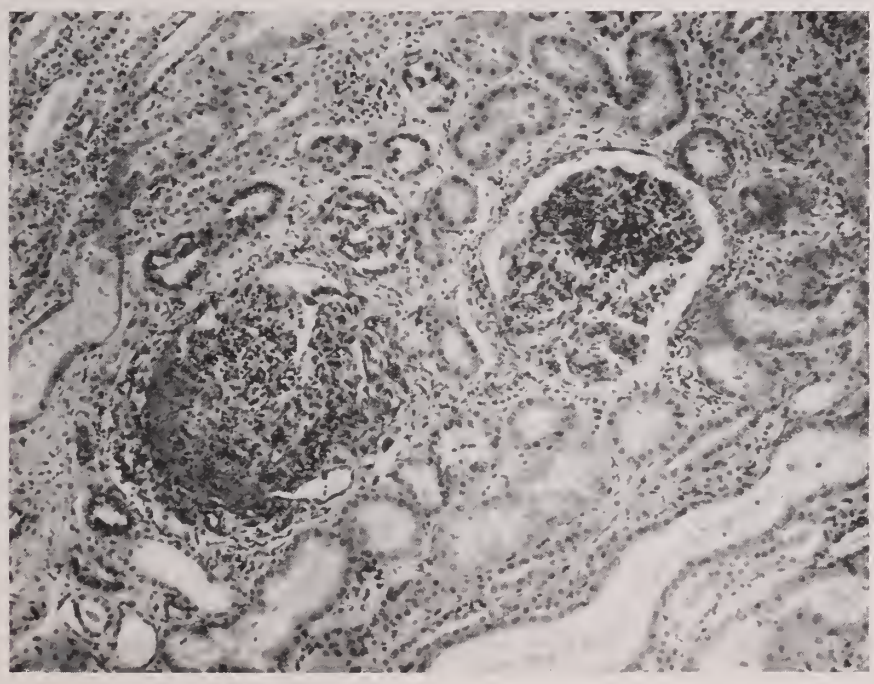


Fig. 5—Two glomeruli show markedly increased cellularity and one on the left shows fibrinoid necrosis and adhesion to the Bowman's capsule.

contained blood and protein casts. Hematoxylin bodies are seen in a few glomeruli (Fig. 6). Hematoxylin bodies described by Gross and Klemperer are found in a variety of tissues in acute erythematosus.

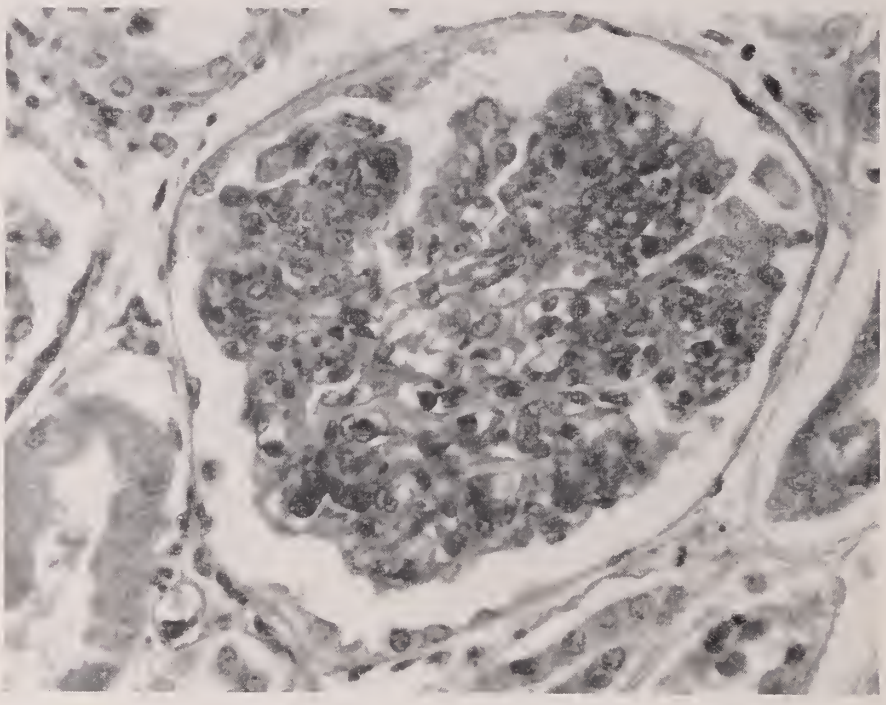


Fig. 6—A hematoxylin body in the glomerulus of kidney.

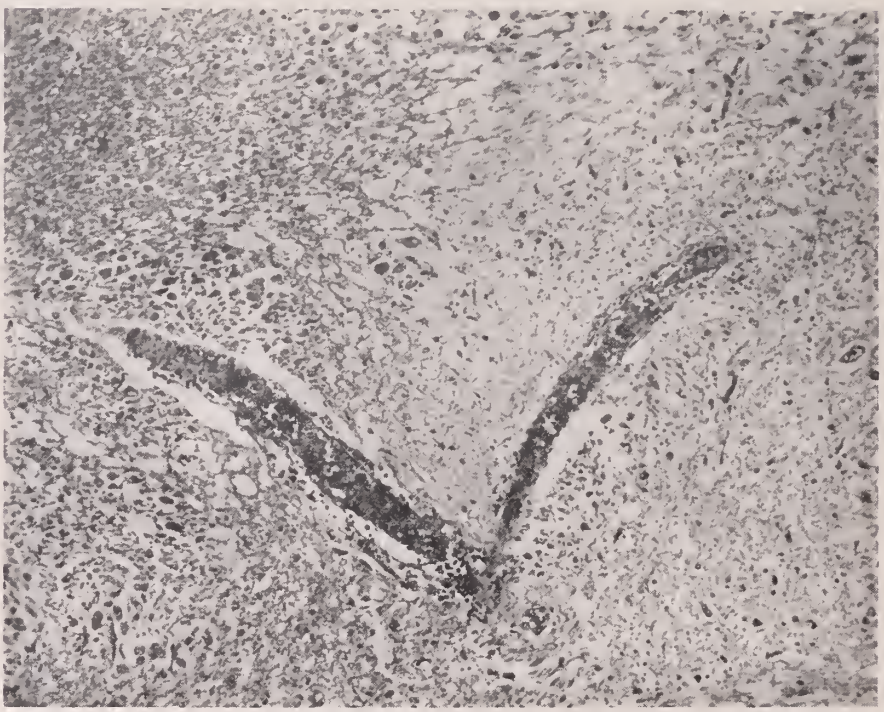


Fig. 7—Cerebral arterioles which are occluded by hyaline thrombus material. The surrounding tissue shows encephalomalacia.

Although they were seen in 32 of 35 cases of this disease by Klemperer, in our small series they have been difficult to find in appreciable numbers. Their exact nature is still controversial as well as the mechanism by which they are brought about. Klemperer showed by cytochemical methods that free hematoxylin-staining bodies were contained partly depolymerized desoxyribonucleic acid. Their relationship to the L. E. cell of Hargraves remains to be clarified. Whether the L. E. factor in the serum of patients

with acute lupus is necessary for the appearance of hematoxylin bodies is under investigation. The L. E. cell probably represents a polymorphonuclear leukocyte which has phagocytized changed nuclei of polymorphonuclear granulocytes (leukocytes). Friou and co-workers of Yale University showed that serum from a large number of patients with disseminated lupus erythematosus caused nuclear localization of fluorescent antihuman globulin. The capillary basement membranes showed slight thickening but it was mostly obscured by more acute proliferative and exudative changes of the glomeruli.

The adrenals were remarkably well preserved in spite of considerable fibrinoid necrosis of the small blood vessels in the periadrenal fat. The brain showed thrombosis of small blood vessels throughout with focal areas of encephalomalacia being generalized (Fig. 7).

Reports of acute disseminated lupus being caused by hypersensitivity to penicillin have appeared in the literature from time to time. Such reports should be consumed with skepticism as this is a difficult thing to prove. Lastly today I should like to emphasize the importance of lymph node biopsy in lupus as a valuable adjunct to the diagnostic armamentarium. The pathognomonic features of the node are—focal necrosis, fibrinoid necrosis of capillaries with thrombosis, hematoxylin bodies, plasma cells and Russell's bodies.

A few arterioles in the submucosa of the ileum showed fibrinoid necrosis of the walls. No ulceration is found in the stomach, duodenum or elsewhere in the gastrointestinal tract.

The death in this case was probably due to renal failure following extensive glomerulonephritis and vascular damage and widespread involvement of the cerebral vessels with resultant encephalomalacia and brain damage.

Parkinson's Disease

A new drug has been called "an invaluable aid" in the treatment of Parkinson's disease, or "shaking palsy," by two New York doctors.

Drs. Lewis J. Doshay and Kate Constable reported an American study of orphenadrine (Disipal) hydrochloride, which has been used experimentally in Europe for several years.

The drug helped 55.7 per cent of 176 patients and "proved exceptionally beneficial" in the control of some of the most disturbing symptoms of the disease, which is also called paralysis agitans, they said in the April 13th Journal of the American Medical Association.

While the drug's effects eventually wore off in many patients, it still has an important place in the treatment of Parkinson's disease, a progressive nervous disorder of later life. Combined with other drugs it can produce improvement that cannot be obtained when the drugs are used alone.

The authors noted that it is usually necessary for a patient to take several drugs, either separately or together, in order to control the many symptoms of the disease. For this reason, a patient with Parkinson's disease must remain constantly under a doctor's care.

Orphenadrine was especially helpful in releasing free, spontaneous, and automatic activity of the body. One of the major manifestations of the disease is muscular rigidity and loss or slowing of voluntary movement. The return of spontaneous and automatic activity in these cases apparently springs from some action of the drug on the central nervous system, since other drugs are known to have a more powerful effect on muscular rigidity.

It also exerted a beneficial effect on gait, posture, balance, weakness, tiredness, mental depression, excessive salivation, excessive blinking, and spasmodic eye movements. It helped improve minor tremor, although it had no effect on serious tremor, one of the major symptoms of the disease.

The authors are on the staffs of the Neurological Institute of Presbyterian Hospital and the department of neurology, College of Physicians and Surgeons, Columbia University.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

The Automotive Crash Injury Program in Virginia

Since July, 1954, the Virginia State Department of Health has cooperated in the Automotive Crash Injury Research study that has been conducted by the Cornell University Medical College for a number of years. The Medical Society of Virginia gave its approval at the start and the cooperation of Virginia physicians in the study areas has been necessary for the success of the study. The role of the Virginia State Police is extremely important.

The chief object of research is to provide reliable information on specific causes of injuries to occupants of passenger cars involved in crashes which occur on highways in rural areas of the county or counties being studied. This information is combined with similar material obtained from reports from a number of other cooperating states. Data produced from this interstate project has identified the most frequent causes of injuries as ejection from doors, which burst open as a result of impact on some other section of the car, from contact with the windshield, header strip, or instrument panel, from contact with the steering wheel and steering components, and from contact against door structures. Evaluation of accidents in terms of specific types of injuries, severity, body areas affected, etc., have been made following analysis of data which is derived from translating basic accident and injury reports into punch card terms and studying the cards so punched on IBM machines. These studies supplied information that could be presented to safety organizations and representatives of the automotive industry and, as a result of the conferences, recommendations were made to the automotive design engineers. Certain safety devices were planned and have been incorporated in the manufacture of cars produced by two major manufacturers.

The study, as it is conducted in Virginia, follows Plan "B" which calls for the selection of small segments of the State to represent varying terrain, climate, and traveling conditions. Approval and cooperation of members of the local medical society are first sought. The director of public health is consulted. The Virginia State Police are on hand to complete the organization of those who are to obtain and forward the necessary information. The State Police are at the scene of the accident, they note the cars involved (there must always be a passenger car involved in an accident that is to be incorporated in the study); they obtain a complete history, describe the positions of the cars, approximate their speed, make photographs, record the number of persons involved and their injuries. They state whether persons are able to care for themselves, are committed to care of friends, are transferred to physician's office, are taken to hospital, or are sent to mortuary. They inform the physicians and hospitals of the necessity of completing a medical record for each person injured and of sending the same to the health director. On receipt of these records, the health director checks them and forwards them to the executive office of The Medical Society of Virginia. From here they go to headquarters of the Virginia State Police and are assembled with all records dealing with the accident. They are then mailed to the headquarters of the study program at Cornell University Medical College, in New York, for processing with reports from other states.

Since 1956 some automobiles have been manufactured with safety door lock designs, safety belts, padding, and energy-absorbing steering wheels, and it is essential to evaluate these protective devices. It has been necessary, therefore, to supplement the usual program involving all models of passenger cars, with a special study that gives particular details in accidents involving these new cars.

Members of the staff of the research center always travel to a new area to visit physicians and hospital administrators, to talk to various medical groups, and to consult with the health director and members of the State Police. They make sure that all understand the type of information to be obtained and the use of the report blanks on which this information is reported. If data from various areas of the State and from scattered states is to be coordinated, it must be collected and recorded in a uniform manner. The study is carried on in a specific area for six months and following that is transferred to another part of the State. Areas in northern Vir-

ginia, in the west-central portion, and in the western section have already participated. A new study area opened on May 1, when two counties in the southeast, Dinwiddie and Prince George, became the scene of operation. Though accidents occurring within the limits of a city are not included in the study, the hospitals in Petersburg and Hopewell will be the ones to which injured persons will be carried and, therefore, the physicians of these two cities will participate.

The gross number of injuries and fatalities places motor vehicle accidents in the epidemic disease classification and the reduction of both morbidity and mortality from this cause demands the interest and cooperation of public health organizations and of medical societies in their prevention.

Monthly Report of Bureau of Communicable Disease Control

	April 1957	April 1956	Jan.-April 1957	Jan.-April 1956
Brucellosis	1	0	6	5
Diphtheria	2	2	4	17
Hepatitis (Infectious)	51	44	190	209
Measles	932	6169	2583	12869
Meningococcal Infec.	8	8	30	36
Meningitis (Other)	15	3	62	41
Poliomyelitis	3	1	11	5
Rabies (In Animals)	23	31	113	159
Rocky Mt. Spotted Fever	1	1	1	4
Streptococcal Infections	898	743	3197	2718
Tularemia	0	1	15	5
Typhoid Fever	1	5	13	7

Skin Reactions

"New drugs, new eruptions" has long been an adage of dermatologists. Now it seems necessary to add to it: "New drinks, new eruptions," and maybe even, "New travels, new eruptions."

Two unusual cases of skin sensitivity—one to the recently popular drink, gin and tonic, and the other to unroasted cashew nuts found in the tropics—have been reported in letters to the editor of the Journal of the American Medical Association which appear in the May 4 issue.

Drs. Frederick G. Novy, Jr. and Gordon R. Lamb, Oakland, Calif., told of a patient who developed a severe reaction after drinking gin and tonic (quinine water) because of his sensitivity to quinine.

They said that such sensitivity may produce headache, tinnitus (sounds in the ears), deafness, dizziness, visual impairment, fever, nausea, vomiting, and, most commonly, skin eruptions.

Their patient knew he was sensitive to quinine and usually avoided drinking quinine water. However he attended a party at which only gin and tonic was served and, in the course of three hours, had several drinks. The doctors estimated that he consumed only about 45 milligrams of quinine, yet he developed a severe reaction—eruptions, redness, and swelling occurred all over his body within 24 hours.

At the end of 16 days, including six in the hospital, the eruption had cleared except for a few spots on his hands and feet. Treatment included aluminum acetate solution dressings, corticotropin, and trepelennamine citrate.

The case of cashew nut sensitivity was seen by Drs. Carroll S. Wright and Donald N. Tschan, Temple University Medical Center, Philadelphia. They reported it to the Journal because Americans traveling abroad may develop the eruption, "one that is scarcely mentioned in the textbooks."

Dermatitis from the cashew nut is rare in the U.S. The tree grows chiefly in tropical America, Africa, and the West Indies, and dermatitis results only from contact with the rind oil and not from the nutmeat. In preparation for commercial use, the nuts are roasted, causing the outer shell to burst open and release the oil, which burns away.

The patient picked cashews while traveling in Ceylon. She immediately developed a severe inflammation on the hands, neck, and face. The cause was not determined until she came home, opened some nuts she had brought with her, and developed a similar eruption.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Blue Shield Liaison Committee

A news item in Current Currents of this issue of the Monthly announces the appointment of the Medical Society's Blue Shield Liaison Committee. It is indeed gratifying that the Society has thus officially confirmed its original approval of Blue Shield and—more—has undertaken to assist the Plans keep up with the constantly changing pattern of medical practice.

Why should the Society take a special interest in Blue Shield?

For one thing, every physician in the State has a vital professional stake in the success of his own medical prepayment Plan. His Plan demonstrates his determination to solve the basic problem of medical economics on terms that will assure him a continuing opportunity to give his patients the best care he is capable of rendering.

Secondly, the Blue Shield Plans in Virginia are accounting for an ever larger part of the incomes of Virginia's physicians. The Society quite properly should make sure that the Blue Shield Plans it is sponsoring are providing physicians with reasonable compensation for those services for which the Plans have respectively arranged to pay.

Thirdly—and perhaps most important—only through Blue Shield can the medical profession continue to control the economy of medical practice. Professional societies should exert a controlling, directing influence over Blue Shield because Blue Shield, in turn, exerts a dominant influence on the shape and destiny of the voluntary health insurance movement as a whole. If organizations unrelated to the medical profession were to take over the entire voluntary prepayment program, then control of the basic economy of American medicine would pass completely out of the hands of the medical profession.

During 1956 the Blue Shield Plans of Virginia made payments to physicians practicing in the State which totalled more than four and one-half million dollars. That Blue Shield, locally as well as nationally, has developed to giant size, no one will question. That Blue Shield now has an influence on the lives and practices of physicians and, therefore, deserves the thoughtful guidance of those physicians, seems to be equally unquestionable.

Blue Shield, however, is not a Frankenstein in the making. The first, basic requisite of any non-profit prepayment plan that wants to use the name and symbol "Blue Shield" is that the plan be formally and continuously approved by the state and county medical societies in its area of operation. Another requirement, no less basic, is that a Blue Shield Plan's medical policies and schedules of payment be determined by physicians. Currently, each Virginia specialty society has a committee working with the Richmond Plan toward a proper revision of that Plan's arrangements and fees.

In the business of providing payments for medical care, doctors can profit by the advice of lawyers and actuaries, and by the experience of businessmen. But the interests and thoughts of doctors cannot be subordinated and disregarded if there is to be the cooperation necessary to Blue Shield's enduring success. While Blue Shield necessarily operates in accordance with insurance principles, fundamentally it is in no way comparable to an insurance company. An insurance company, for understandable reasons, is guided by consideration of dollars and cents only; Blue Shield must consider the reactions and ideas of the medical profession as well as the actuarial factors.

Thus, the relationship between Virginia's Blue Shield Plans and their sponsoring Medical Society should be as intimate and understanding as between the members of a family. Every doctor has a responsibility for the success of his Blue Shield Plan; through The Medical Society of Virginia, he now has a direct opportunity to take part in its control.

For economic reasons just about every doctor needs Blue Shield. It is equally patent—if not more so—that Blue Shield needs the doctor. Without his guidance, Blue Shield might become something quite different from what the profession wants it to be. Without the doctor's support and active participation, there would not even be a Blue Shield.

Mental Health . . . .

EDNA M. LANTZ

Changes in Mental Hospital Population —10 Year Period

Although the mental hospital population in Virginia has shown an expected gradual increase over a 10 year period (from 1947 to 1957) there are some statistically interesting trends to be noted in the following figures:

Year	Number in Residence	Per cent Increase
1947	9,405	×
1948	9,547	1.5
1949	9,842	3.1
1950	9,914	0.7
1951	9,904	—0.1
1952	10,125	2.2
1953	10,532	4.0
1954	10,856	3.1
1955	11,303	4.1
1956	11,037	—2.4
September 1956	10,900	—1.2
March 1957	10,985	0.8

There has been a continual increase from 9,405 patients in the four mental hospitals on June 30, 1947, year by year (except for 1951), to the high point of 11,303 on June 30, 1955, which was an overall increase of 20.2%. Following this high point, a reversing trend developed and continued until September, 1956, after which an increase began. The increase from September, 1956, to March, 1957, was 0.8%. Although not as rapid an increase as for the years 1947 to 1955, this indicates an upward tendency in hospital population since this period is not a full year. There were about 130 more patients in hospital on March 31, 1957, than on June 30, 1954, which gives additional evidence of an upward trend.

The increasing population in recent months is not unique in Virginia. Reports from other Model Reporting Area* states show that most of them are having an increase in their hospital population, similar to ours.

One of the reasons for an increase in hospital population is the increase in admissions. In the fiscal year 1956 the admissions were 34.8% higher than in 1947. In 1947, there were 2,863 admissions and in 1956, 3,859. The indications are that the admissions for 1957 will exceed the 4,000 mark. The release rate, or turnover, of the admissions has, however, been greater in recent years than in earlier years and has had the effect of keeping the hospital population from being much larger.

The cause of the decrease in patient population beginning in the fiscal year ending June 30, 1956, could be attributed to several different factors, among which may be the growing realization of families (and the public) that mental illness is a disease that can often be treated successfully. This results in better acceptance of patients that can be released from the hospital for return to their homes and communities. The increase in the medical and nursing staff (a larger number of physicians and nurses have been employed in the last few years) has undoubtedly contributed to the release rate. The higher educational level of attendants (each attendant is required to take training on the care of the mental patient) has had some effect. Possibly the advent of the new tranquilizing drugs have made it possible to release a higher number of patients on trial visit. A study to determine this factor's contribution is now under way in Virginia.

With the increase in admissions in 1956 over 1947 (due in part to the increase in general population), the housing and care of the mentally ill would be a far greater problem for Virginia if the release rate had not increased as described above. Some of the increase in admissions is due to an increase of readmissions. Many of these could probably remain out of the hospital, if there could be more "follow up" or "after care" clinics for supportive therapy to released patients. However, until a follow up program is developed, we can expect a growing readmission rate and, with increasing general population, we should expect some increase in the number of resident patients in the hospitals in the near future.

The slight reduction in hospital population in 1950 and 1951 was due primarily to the effects of

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

*Model Reporting Area is an organization of Statisticians of 18 States in cooperation with the National Institute of Mental Health, U. S. Public Health Service. These States have over half of the mental hospital population in the United States.

the Korean War. This followed the same pattern that occurred during World War II. The ability of those with minor disorders and alcoholics to obtain employment during the high employment rate of these periods lowered admissions, which resulted in a reduced hospital population.

This is evidence that when more jobs on the outside are available to handicapped people, they are more acceptable and make better adjustments outside hospital walls. Such consideration should spur the efforts of vocational experts to work in the area of rehabilitation for discharged mental patients.

Let's Reminisce!

In the Virginia Medical Monthly, February 1876, in a report from the meeting of the Richmond Academy of Medicine, Dr. L. S. Joynes read a paper on the Effect of Mental Impressions, Affecting the Parents, upon the Physical and Mental Condition of the Child. "He thinks that the question whether or not strong mental impressions upon the mother during her pregnancy—powerful excitement of the imagination or the emotions, or potent impressions upon the senses calculated to fix the attention and arouse the feelings in an intense degree—affect the child's health, and even the conformation and development of its body, must be answered affirmatively." The following singular case was related to Dr. Joynes some years ago in Accomac Co., Va., by the father of the child. The gentleman's wife, who was pregnant at the time, went to see a negro hung, and was much shocked at the spectacle. The child was born some months afterwards; though perfectly well-formed and healthy, he exhibited as he grew up a mental weakness on the subject of *hanging*.

No doubt women have often assigned causes for marks or blemishes which had no real existence but were the results of *after-thought*. The doctor once knew a white woman who explained her having a *negro* child by having longings for black walnuts during her pregnancy!

Dr. Archer, of Norfolk, Va., saw a woman who, while passing the market-house, was accidentally struck by a piece of *liver* thrown out by the butcher. She brought forth a child with a *growth, resembling liver, projecting from the mouth.*

Another lady, living in one of the counties below Richmond, visited this city while in an early month of pregnancy. During her stay here, she went to a menagerie where there was an hippopotamus. The appearance of this mammal as he raised himself from the muddy pool in which he was kept, covered, as he was, all over with flakes of mud, and in every respect hideous to sight, so affected the lady that she could not stay longer at the "show". When her child was born, it was the subject of ichthyosis in a most marked degree, which covered especially the parts of the body that had appeared to her to be the most affected in the hippopotamus.

There were many objections to these statements, but Dr. Joynes stated that he was physically unable "to-night" to reply to the objections that had been made; but he had just been handed a note stating that on last Sunday night Dr. George H. Bright of this city, had delivered a woman of a dead child whose head in all respects looked more like that of a cat than of a human being. This is attributed to the fact that during an early month of pregnancy the lady was frightened by a cat, and which made a lasting impression upon her mind.

Miscellaneous . . . .

Foreign Medical Graduates Licensed in Virginia.

Until recent years the Virginia Board of Medical Examiners has been handicapped in selection of graduates of foreign medical schools for examination leading to the practice of medicine. Some fifty-odd schools on which a rating was possible have proved to be up to American standards for medical education. These are mostly in Great Britain, Switzerland and Scandinavia.

There are approximately 500 other foreign medical schools on which an evaluation was not possible.

In 1954 the Virginia Legislature passed a law which provided for admission of graduates of unapproved foreign medical schools (Section 54-306 (3) Code of Virginia), whereby such a graduate having met certain requirements as to school of graduation, identity, courses of study etc., might be admitted to the examination provided he took two years of internship in hospitals approved for such training in the United States or Canada within five years prior to the examination or one or more years of postgraduate study in an approved medical school in the United States or Canada in lieu of one year of internship. The second year of hospital training may be a residency if so desired. The candidate must be a citizen of the United States or if not a citizen, he must sign a declaration of intention to become a citizen. If citizenship is not acquired within seven years the license will automatically become void. The Virginia Board has had a great number of applications for examination. These have been carefully screened.

Since July 1, 1954, 138 foreign medical graduates have passed the examinations and have been licensed. Questionnaires were sent to these last month. They were asked to reply to the following questions:—

1. What was your object in applying for licensure to practice medicine in Virginia? We would like to know whether you have immediate plans for practicing here, or if you wished to be licensed in order to practice in the Veterans Administration, Armed Services, etc.

2. Is it your plan to remain in the United States of America?

3. If so what steps are being taken toward obtaining citizenship?

4. In what type of practice are you engaged? (Surgery, Internal Medicine, Anesthesiology, etc.?)

Following is a statistical report on the 130 who replied:

Nationality		Citizen of United States	
		Yes	No
Argentine	4		4
Austrian	3	1	2
Australian	1		1
Brazilian	2		2
British	15		15
Chilean	1		1
Chinese	19	5	14
Cuban	2	1	1
Czech	2		2
Dominican	6		6
Ecuadorian	2		2
Filipino	2		2
French	1		1
German	20		20
Greek	2		2
Guatamalan	1	1	
Haitian	1		1
Hungarian	2		2
Indian	1		1
Iranian	7	1	6
Iraqian	3		3
Italian	4	1	3
Japanese	1		1
Jordanian	1		1
Latvian	1		1
Lebanese	3		3
Mexican	2		2
Netherlands	2		2
Polish	4		4
Russian	4	2	2
Scot	2		2
Spanish	3		3
Syrian	1		1
Swiss	1		1
Turk	3		3
Yugoslav	1		1
	130	12	118

All those who are not yet American citizens say they are in the process of obtaining citizenship and intend to do so, but most of them have not been in this country the required time for citizenship.

Every one says he plans to remain in the United States.

Of the 130 licensees, 40 are now practicing in Virginia; 3 are teaching in Virginia Medical Schools; 21 state they intend to practice in Virginia when their specialty training is completed; 15 plan to prac-

tice in Virginia when their military service is completed; 32 state their object in applying for Virginia licensure was to practice in the State but they are not yet doing so; 6 said their object in applying for licensure was the possibility of practicing in Virginia but they have no definite plans to do so: 8 said their plans were indefinite, no plans to practice in Virginia at this time; 1 is doing postgraduate work in Virginia; 3 state they planned to come to Virginia but changed their minds due to personal reasons. 1 states he has 4 licenses to practice medicine, including Virginia, and he is investigating all opportunities.

TYPES OF PRACTICE and RESIDENCIES

	Practice	Residencies
General Practice	13	1
Internal Medicine	11	7
Surgery-Gen'l	15	2
Medicine & Surgery	3	
Thoracic Surgery	1	3
Urological Surgery	1	
Surgery-proctology	1	
Neurosurgery	1	
ENT & maxillo-facial surgery		1
Psychiatry	13	3
Neuropsychiatry	1	
Pediatrics	10	1
Anesthesiology	10	
Obstetrics & Gyn.	5	2
Obstetrics & Gyn.		Research 1
Pathology	7	2
Radiology	3	3
Ophthalmology	3	
Otolaryngology	2	
Cytology	1	
Pulmonary Tuberculosis	1	
	102	25 1
Not practicing	2	

Number of foreign graduates licensed—by dates of examinations:

June 1954	4
December 1954	11
June 1955	13
December 1955	34
June 1956	34
December 1956	42
	138

K. D. Graves, M.D.,
Secretary-Treasurer, Virginia Board of Medical Examiners

Reduces Fracture Swelling

A drug which has been used to aid local anesthesia in eye operations has been found helpful in setting a compound fracture of the leg.

Two Texas doctors reported using hyaluronidase to reduce swelling in the foot and lower leg after the leg was broken. Accumulated fluid in the area cut off the blood supply to the foot and made it impossible to close the incision made in order to set the bones.

Capt. Leroy W. McDaniel (MC), chief of surgical services at the 4462nd USAF Hospital, Foster Air Base, Victoria, Texas, and Dr. Jerome C. Hohf, Marlin, Texas, civilian consultant to the hospital, made their report in the April 13th Journal of the American Medical Association.

Hyaluronidase is an enzyme, a chemical substance which induces certain bodily changes without undergoing any change itself. Hyaluronidase softens certain tissue substances and allows injected solutions, such as local anesthetics or penicillin, to spread farther and faster than normal and speeds their absorption.

Hyaluronidase had the same effect of speeding the spread and absorption of accumulated fluid in this compound fracture case. In fact, within 30 to 60 minutes after hyaluronidase was injected into the injured area, the swelling of the leg and foot had been reduced to a point where it was possible to close the surgical opening.

The doctors concluded that closing the incision would have been impossible without hyaluronidase. Closure was important since it helped return a normal blood supply to the foot.

Woman's Auxiliary . . . .

President—Mrs. Lee S. Liggan, Irvington
President-Elect—Mrs. John R. St. George, Portsmouth
Vice-Presidents—Mrs. Maurice Bray, Suffolk
Mrs. J. Rollins McGriff, McLean
Mrs. H. H. Howze, Norton
Recording Secretary—Mrs. James R. Grinels, Richmond
Corresponding Secretary
Mrs. A. B. Gravatt, Jr., Kilmarnock
Treasurer—Mrs. Robert H. Detwiler, Arlington
Publication Chairman—Mrs. Paul Pearson, Warsaw

Arlington.

The final meeting of the year of the Arlington Auxiliary was held on May 14th. There was a luncheon, followed by the installation of new officers, who are: President, Mrs. Sigmund Newman; president-elect, Mrs. Landon Gant; vice-president, Mrs. Arthur Mitchell; corresponding secretary, Mrs. Robert Mitchell; treasurer, Mrs. Alan McKelvie; historian, Mrs. Lloyd Burk; and parliamentarian, Mrs. Thomas McGavin.

Danville-Pittsylvania.

This Auxiliary met on April 18th, with the president, Mrs. Henry R. Bourne, presiding. Guests were Mrs. Lee S. Liggan, president of the State Auxiliary, and Mrs. John R. St. George, president-elect. Mrs. Liggan told of the aims and projects of the State Auxiliary and urged continued cooperation.

Projects of this Auxiliary include a scholarship for nurses available though a fund established by this organization. Nurse recruitment films will be shown in area schools by the Philanthropy chairman to make these scholarships known and to find interested students. The ways and means committee, headed by Mrs. E. B. Robertson, will be active in raising any necessary funds.

A donation of $25.00 has been sent to each of the following: Leigh-Hodges-Wright Memorial Fund; Student Loan Funds; and Crippled Children's Hospital. A contribution of $10.00 was sent to the Virginia Council on Health and Medical Care, and $59.00 to the American Medical Education Foundation.

The annual Doctor's Picnic will be held in July.

Ruth R. Sager (Mrs. William L.)
Chairman, Publicity Committee

Northampton-Accomac.

The spring meeting of this Auxiliary was held on April 9th at the home of Mrs. W. Carey Henderson, with 17 members and 2 guests present. Mrs. Lee S. Liggan and Mrs. John R. St. George, president and president-elect of the State Auxiliary, were guest speakers. A social period and tea followed the business meeting.

A Doctor's Day Party was held on March 30th at the home of Dr. and Mrs. Joseph E. Gladstone.

"Heedless Horsepower"

"Heedless Horsepower" has been named by The Travelers Insurance Companies as the fundamental cause of our evermounting toll of disaster on U.S. highways.

The 23rd annual highway safety booklet published by The Travelers this year reports on the 1956 highway toll that saw 40,000 Americans lose their lives and 2,368,000 more injured—an increase of nearly six per cent in fatalities and almost 10 per cent in injuries over the 1955 record. More than 2,700,000 copies of the booklet have been printed for free distribution.

"Everyone who is in a position to influence drivers should learn that horsepower, in the hands of the heedless, is the fundamental cause of our evermounting toll of disaster," the booklet stated.

Despite the large number of safety devices embodied in cars today, any combination of speed plus carelessness, thoughtlessness and lack of consideration turns the present high-powered cars into missiles of death.

In reviewing last year's grim record, the report shows that excessive speed again topped the list of driver actions resulting in death. A total of 13,830 died and 798,920 were injured in crashes blamed on speed.

Another dismal mark on the record was the number of pedestrian fatalities. 8,080 killed and 225,000 injured—an increase of nearly 3,000 casualties over 1955's figure and marking the first time in six years this figure has not lowered from the year before.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgement of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

The Prevention of Disease in Everyday Practice. By ISADORE GIVNER, B.S., M.D., F.A.C.S., Associate Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Director of Ophthalmology, New York City Hospital; etc. And MAURICE BURGER, M.Sc., M.D., C.M., F.A.C.P., Associate Professor of Medicine, New York University Post-Graduate Medical School; Attending Physician and Director, Department of Clinical Pathology, University Hospital; etc. And Contributors. The C. V. Mosby Company, St. Louis. 1955. 964 pages. With 50 Text Illustrations and Frontispiece in Color. Price $20.00.

The Prevention of Disease In Everyday Practice is a volume of 964 pages with 27 chapters, each chapter covering an aspect of preventive medicine. The book is of value to the general practitioner, not as a volume to be read through, but as a reference. A fair number of good charts are scattered through the reading material and most of the reading material is concise with definite statements as to treatments known or unknown.

The book is recommended as a reference.

THOMAS D. MCCAHILL, M.D.

The Care of the Expectant Mother. By JOSEPHINE BARNES, M.A., D.M. (OXON), M.R.C.P. (London), F.R.C.S. (England), F.R.C.O.G., Assistant Obstetrician and Gynecologist, Charing Cross Hospital and Elizabeth Garrett Anderson Hospital; Surgeon, Marie Curie Hospital. Philosophical Library, New York. 1957. 270 pages. Illustrated. Cloth. Price $7.50.

Notes On Atomic Energy For Medical Officers. An Introduction to the subject for Service and other Medical Officers who may be concerned with defence against atomic bombs and similar problems. By The Royal Naval Medical School, Alverstoke, Hampshire, England. Philosophical Library, New York. 1957. 169 pages. Illustrated. Cloth. Price $4.75.

Connective Tissue In Health and Disease. Edited by G. ASBOE-HANSEN, M.D., Connective Tissue Research Laboratory, University Institute of Medical Anatomy, Copenhagen. Copenhaven, Eljnar Munksgaard. New York, The Philosophical Library. 1957. 321 pages. Illustrated. Cloth. Price $15.00.

Practical Diagnosis and Treatment of Liver Disease. By CARROLL MOTON LEAVY, M.D., Director of Clinical Investigation, Director of the Outpatient Department, and Attending Physician, Jersey City Medical Center, Jersey City, N. J.; Consultant in Medicine, U. S. Naval Hospital, St. Albans, N. Y. Foreword by Franklin M. Hanger, M.D., Professor of Medicine, College of Physicians and Surgeons, Columbia University. Illustrations by Felix Traugott. Paul B. Hoeber, Incorporated, New York. 1957. xii-336 pages. Illustrated. Cloth. Price $8.50.

Battle For the Mind. By WILLIAM SARGANT, M.D., London, England. Doubleday & Company, Garden City, New York. 1957. 263 pages. With illustrations. Cloth. Price $4.50.

Experimental Psychology and Other Essays. By I. P. PAVLOV. Philosophical Library, New York. 1957. 653 pages. Cloth. Price $7.50.

Clinical Laboratory Methods. By W. E. BRAY, B.A., M.D., Consulting Laboratory Director, Martha Jefferson Hospital, Charlottesville, Virginia; formerly Professor of Clinical Pathology, University of Virginia and Director of Clinical Laboratories, University of Virginia Hospital. St. Louis, The C. V. Mosby Company. 1957. 731 pages. With 124 text illustrations and 18 color plates. Cloth. Price $9.75.

Albert Schweitzer. The Story of His Life. By JEAN PIERHAL. Philosophical Library, New York. 1957. 160 pages. Illustrated. Cloth. Price $3.00.

Baruch Spinoza. The Road To Inner Freedom. The Ethics. Edited and with an Introduction by DAGOBERT D. RUNES. Philosophical Library, New York. 1957. 215 pages. Cloth. Price $3.00.

General Urology. By DONALD R. SMITH, M.D., Clinical Professor of Urology and Chairman of the Department of Urology, University of California School of Medicine, San Francisco; etc. Lange Medical Publications, Los Altos, California. 1957. 328 pages. Illustrated. Price $4.50.

The Fight For Fluoridation. By DONALD R. McNEIL. New York. Oxford University Press. 1957. x-241 pages. Cloth. Price $5.00.

The Compleat Pediatrician. Practical, Diagnostic, Therapeutic and Preventive Pediatrics. Seventh Completely Rewritten Edition. By W.C. DAVISON, M. D., Professor of Pediatrics, Duke University School of Medicine. And JEANA DAVISON LEVINTHAL, M. D., Instructor in Pediatrics, University of Michigan School of Medicine. Duke University Press; Durham, North Carolina. 1957. Price $4.25 by check with order, or $4.50 on credit.

Expectant Motherhood. By NICHOLSON J. EASTMAN, M. D., Professor of Obstetrics, Johns Hopkins University and Obstetrician-in-Chief, Johns Hopkins Hospital. Third Edition, Revised. Boston. Little, Brown and Company. 1957. xiv-198 pages. Cloth. Price $1.75.

Gynecologic Therapy. By WILLIAM BICKERS, M. D., Attending Gynecologist to Richmond Memorial, Retreat for the Sick, Sheltering Arms, Richmond Community and Evangeline Booth Hospitals, Richmond, Virginia. Charles C. Thomas, Springfield, Illinois. 1957. xiii-158 pages. Cloth. Price $4.25.

The Riddle of Stuttering. By C. S. BLUEMEL, M. D., The Interstate Publishing Company, Danville, Illinois. 1957. 142 pages. Hard bound $3.50 and paper bound $1.50.

Liver, Biliary Tract and Pancreas. By FRANK H. NETTER, M. D. Edited by Ernst Oppenheimer, M. D. The Ciba Collection of Medical Illustrations. Volume 3. A Compilation of Paintings on the Normal and Pathologic Anatomy of the Digestive System. Commissioned and published by Ciba. 1957. ix-165 pages. 133 Full-Color Plates. Price $10.50.

Current Currents

A SPECIAL COMMITTEE ON BLUE SHIELD RELATIONSHIPS has been appointed by Dr. Hagood and is already hard at work. Headed by Dr. Harold W. Miller, Woodstock, the Committee is gathering information, suggestions, etc., which will help considerably in its efforts to bring about better understanding and cooperation between physicians and the Blue Shield plans. Members of the Committee are Dr. Carl W. Meador, Richmond, Dr. William Barney, Lynchburg, and Dr. Reverdy H. Jones, Jr., Roanoke.

THE HOUSE ARMED SERVICES COMMITTEE, in an effort to replace the special doctor draft act which expires June 30, has approved an amendment to the regular draft act. It was drawn up by the Committee staff and differs from the bill offered by the Defense Department. The new bill would:

1. Authorize the special call-up of physicians, dentists, and allied specialists through age 35 if they have had educational deferments; they would be drafted as members of their professions, rather than by age groups, as is the case with other draft registrants.
2. Continue the National, State and Local Medical Advisory Committees to Selective Service System; in its bill Defense Department did not ask to have the committees continued, explaining that this was a Selective Service matter and Selective Service had not requested they be retained.
3. Continue several provisions that were in the special doctor draft act, but not in the Department's bill, including: right of doctors to volunteer for and be commissioned at an early date, right of doctors to resign their commissions after 12 months or more of active duty, provision for use of alien physicians in the military services.

AN INCREASE IN DOCTORS-TROOPS RATIO has been "vetoed" by the House Armed Services Committee. The planned increase, announced recently by military witnesses, was from the present 3 per 1,000 to 3.4. Chairman Vinson said the veto would not be binding on the services, but would "put the Appropriations Committee on the alert" to deny funds to finance the additional military physicians. It was estimated that holding the ratio at 3 would eliminate the need for an extra 1,000 physicians.

TRADE MAGAZINES have reported that $32 million was spent during 1956 on television spots for drug products. This included $6 million to advertise cold remedies, $4 million for headache remedies, and $7 million for indigestion remedies.

THE USE OF SAFETY BELTS has been endorsed by two crash injury researchers in testimony before a special sub-committee of the House Interstate and Foreign Commerce Committee. Mr. John O. Moore and Mr. Edward R. Dye, Cornell University, stated that manufacturers would probably equip autos with belts when the public makes it plain it wants the added protection.

Mr. Moore told of results of a study of actual auto accidents, where cars equipped with the safety belts were matched against other cars not so equipped and involved in similar accidents. It was found that use of the belt reduces human injuries by 60%. In answer to published criticism of the belts, he said these opposition claims were based on test "accidents", using dummies, where the cars were rammed into solid obstacles, a type of accident that makes up only 16% of the total accidents in the country.

The Cornell research project has the cooperation of 14 states, including Virginia, and others have indicated they wish to participate. The project screens about 12,000 accidents a year.

A NEW DRAMATIC FILM pointing up ways of preventing professional liability claims and suits will be available July 1 for medical society meetings. This new film entitled "The Doctor Defendent", is the second in a series of films on various medico-legal problems being produced by the Wm. S. Merrill pharmaceutical company in cooperation with the American Medical Association and the American Bar Association. Bookings may be arranged through AMA's Film Library or the State Office of The Medical Society of Virginia. It will be shown for the first time Wednesday, June 5, during the AMA's annual meeting in New York City.

THE AMERICAN MEDICAL PROFESSION is urged to reiterate its support of the Jenkins-Keogh plan. The bills (H.R. 9 and 10) now before the Congress would permit a self-employed person to put a small part of his income into a retirement fund, deferring payment of taxes on that amount until it is received in the form of retirement benefits. The legislation has the strong support of the AMA.

Opposition to this legislation has been voiced by the Treasury Department, with the claim that it will result in a loss of tax revenue. Proponents of the Jenkins-Keogh plan maintain that the resulting expansion of the nation's economy would result in an increase in tax revenue.

Heading the national campaign to promote Jenkins-Keogh is the American Thrift Assembly, with headquarters in Washington. Cooperating in its work are many national associations, including AMA, American Bar Association and American Dental Association. Pamphlets on Jenkins-Keogh are available at the Assembly's offices, 1025 Connecticut Avenue, N.W., Washington, D. C.

CONTRIBUTE NOW TO A.M.E.F.

Editorial . . .

The Rise of the Medical Travel Club

A REMARKABLE phenomenon of the current medical scene is the growth of small medical travel clubs since World War II. These societies are not peculiar to the past decade but the considerable number formed during recent years and the relative youth of the members in the later organizations suggest that they are here to stay and doubtless will increase in number and popularity for many years.

War time association, especially during overseas service, has been the stimulus that led to the formation of many of these organizations. The Éclat Club of World War I vintage probably was the first of the modern travel clubs. The Southern Society of Clinical Surgeons, which was formed about thirty years ago, chiefly by young surgeons in Richmond and Atlanta, has been the prototype for a number of similar organizations. The Surgeons Club, which met in Richmond this April, draws largely from the north and middle west. This was organized after the Southern Society of Clinical Surgeons visited Rochester, and the younger men at the Mayo Clinic saw possibilities for knowledge as well as recreation in such an organization.

Necessary ingredients for a travel club are a group of kindred spirits in the same field of endeavor and an energetic secretary. The latter is essential. An early decision must be made as to whether the wives should be invited. Arguments have been advanced on both sides of the question but the general impression is that fewer arguments result if they are invited.

A second question arises several years after the group is formed. This concerns whether a senior list should be set up and younger members taken in as the older ones graduate to a more inactive status. One inherent difficulty in this plan is the lack of desire on the part of the older members to become senior members. An alternate method is to close the membership and "grow old gracefully together". This latter decision is usually reached late at night following an evening in which considerable alcohol was consumed. The drawback to the "growing old gracefully" business is that not only do the members grow older but time takes its toll and some of them pass to their reward with the result that the remaining brothers become increasingly aware of the widening gaps in the ranks. The final meetings of such an organization may not be altogether happy ones.

The size of a travel club depends upon several factors. Medical groups tend to be larger than surgical clubs for the latter should be small enough to permit the members to view operations without contaminating the operative field. The extent of the area from which the organization draws its membership may also be a determining factor in establishing the size of the club. Some societies confine their programs to papers prepared by members of the organization. Other groups depend on the medical centers they visit to furnish the program. Some travel clubs meet only in the home towns of members while others make a point of never meeting in the geographical area from which the membership is drawn.

All in all it is a pleasant and painless way to obtain medical knowledge. The only deterring factor may be a reluctance on the part of the more popular medical institutions to prepare an ever increasing number of clinics for the visiting doctors. Fortunately this saturation point has not been reached and it is to be hoped that it is still far in the future. Meanwhile the travel clubs increase in popularity and number.

H.J.W.

Society Proceedings . . . .

The Virginia Orthopaedic Society

Held its annual scientific program on April 12 and 13 at the Homestead, Hot Springs. The Friday afternoon program was a panel discussing medicolegal problems. The meeting was called to order by the President, Dr. Beverley Clary. The panel consisted of Dr. Charles Franklin, Charlottesville; Attorney, George Allen, Sr., Richmond, representing the plaintiff's side of various problems; Mr. Richard Williams, Attorney, of Richmond, representing the defendant's side of the problem; Mr. C. C. Harper, Attorney, Richmond, claims adjuster representing the insurance company's attitude toward these problems. Moderator was Dr. William M. Deyerle. A very lively question and answer period ensued. It was felt that there was a very satisfactory solving of initial problems involving medical and legal professions and that both groups benefit from this type of seminar. A cocktail party and dinner for members, guests and their wives were enjoyed by all.

The following morning, a mock trial was presented. Dr. Charles Franklin, Charlottesville was acting judge, Mr. Wilbur Allen, Attorney of Richmond, was lawyer for the plaintiff. Mr. Richard Williams was the attorney in behalf of the defendant. Dr. M. J. Hoover and Dr. William M. Deyerle were the two expert medical witnesses. The case involved a patient sitting still at a stop light, struck from the rear by another car, receiving a neck injury. The case was presented in its entirety and was followed by open discussion. The entire case, as well as the discussion has been recorded and is available for use by interested parties. It was felt that this was an excellent may of bringing out the actual procedures involved in medicolegal cases while being tried.

A color movie was shown of the Scuderi Prosthesis. This was exceptionally well done and enjoyed by all.

Dr. Wm. M. Deyerle, *Secretary*

The Danville-Pittsylvania Academy of Medicine

Met at the Danville Country Club on May 10.

The Academy was honored at that time to have as its guests speaker Dr. John Sessioms, Assistant Professor of Medicine, University of North Carolina School of Medicine, who spoke on the Physiological Approach to the Diagnosis and Treatment of Peptic Ulcer.

Southwestern Virginia Medical Society.

The annual spring meeting of this Society was held on April 25th, at the Martha Washington Inn in Abingdon. The following program was presented: A case presentation, with movie, on patient with Traumatic AV Fistula of 17 years Duration, Repaired with Surgery by Drs. R. L. A. Keeley, Daniel Leavitt, and Hugh H. Trout, Jr., Roanoke; Congenital Hemolytic Icterus—a case presentation and brief discussion of the role of splenectomy in this and associated cases—by Dr. Thomas W. Green, Bristol, Tenn.; and a panel on The General and Medical Aspects of Pulmonary Diseases with Dr. Edward S. Ray, Richmond, as moderator, and Drs. William Anderson, Harland, Ky., Blake Fawcett, Radford, and Allen Barker, Roanoke, as participants. The speaker for the evening program was Dr. Charles A. Hufnagal, Professor of Surgery, Georgetown University, Washington, D. C.

Norfolk County Medical Society.

At the meeting of this Society on April 15th, Dr. Philip S. Barba, Associate Professor of Pediatrics, Temple University, Philadelphia, spoke on Practical Aspects of Growth and Development.

Richmond Academy of Medicine.

The General Practice program of the Academy was held on April 23rd. Guest speaker was Dr. J. S. DeTar, Milan, Michigan, his subject being Cancer Detection in the Office of the Generalist. Dr. DeTar is the immediate past president of the American Academy of General Practice.

The Neuropsychiatric Society of Virginia,

District Branch, A. P. A., held its spring meeting at the University of Virginia on April 17th. Dr. Hiram W. Davis, Commissioner of Mental Hygiene and Hospitals, spoke during the dinner meeting.

New officers are: President, Dr. Thomas F. Coates, Jr., Richmond; president-elect, Dr. Weir M. Tucker, Richmond; and secretary-treasurer, Dr. William D. Buxton, Charlottesville.

Plans are being formulated to have the fall meeting of the Society on October 27th at The Shoreham in Washington, in conjunction with the annual meeting of The Medical Society of Virginia.

News....

New Members.

Since the list published in the May issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Robert Andrew Abernathy, Jr., M.D., Richmond
John Powell Anderson, M.D., Waynesboro
William Henry Christian, Jr., M.D., Roanoke
Martel Jennings Dailey, M.D., Reedville
Robert Riddick Gatling, M.D., Roanoke
Romulo F. Gonzales, M.D., Petersburg
Marjorie Helgans Hughes, M.D., Arlington
James Brooke Hutt, Jr., M.D., Warrenton
Frank Dargan McKenney, Jr., M.D., Salem
Margueritte Kersey, M.D., Peterstown, W. Va.
William W. Kersey, Jr., M.D., Peterstown, W. Va.
Marilyn L. Miles, M.D., Norton
Sam Chapman Pascoe, M.D., Annandale
Joseph C. Placak, M.D., Abingdon
Roy Randolph Powell, M.D., Portsmouth
David W. Richardson, M.D., Richmond
Walter Dean Warren, M.D., Charlottesville

State Board of Medical Examiners.

At the meeting of the Board, held December 5-7, 1956, the following doctors were licensed by examination:

Ingeborg Ahrens, Farmingdale, N. Y.
Victor Simone Allen, Howard, R. I.
Wilhelm Michael Baade, Petersburg
A. Addison Barman, Ridgewood, N. Y.
Rudolph Anton Josef Benda, Sykesville, Md.
David Simpson Borland, Richmond
Robert Richardson Bowen, Richmond
William Everett Boyd, Norfolk
Robert Bravo-Fourcaud, Brooklyn, N. Y.
Robert James Buchanan, Norfolk
Valentina Bulubash, Northville, Mich.
Christopher M. G. Buttery, Roanoke
David John Cracovaner, Portsmouth
William Dakos, Birmingham, Ala.
Adel I. Demiray, Kansas City, Mo.
Raymond Douglas Dyer, Jr., Portsmouth
Yousif Rizkala Ghazala, Brooklyn, N. Y.
Panos George Gregoriou, Norfolk
Rudolf W. Hoane, Charlottesville
Cecil Hougie, Charlottesville
Edward Sidney Hunter, Jr., Norfolk
Abdol H. Islami, Newark, N. J.
John Spencer Jeremiah, Roanoke
Elena Astra Kalvis, New York, N. Y.
Colin Henri Gard Kendall, Petersburg
Erich Karl Lang, Baltimore, Md.
Hannah V. Leonhardt, Danville
Rowena Taung-ying Li, Brooklyn, N. Y.
George Nicholas Lipsky, Crownsville, Md.
Elmer Francis Lowry, Jr., Alexandria
Volker W. A. Luethy, Chicago, Ill.
Roger J. Madiou, New York, N. Y.
Hans Marienfeldt, Danville
Rafael Antonio Montan, Brooklyn, N. Y.
Leopoldo Segismundo Moreno, Lincoln, Ill.
Charles Hilary Moseley, Jr., Richmond
Antonio J. Munoz, Roanoke
Lon William O'Bannon, Jr., Memphis, Tenn.
Patrick O'Connell, Winchester
John Kenworthy Ogden, Petersburg
Sister Joseph Ignatius Owang, Cincinnati, Ohio
Jean Peng, Flushing, N. Y.
Joseph George Polusky, Flint, Michigan
Werner Prinz, Washington, D. C.
Gerd-Welfhard Prowe, New York, N. Y.
Carlos Amat Recio, Danville, Penn.
Joseph A. Sabri, Washington, D. C.
Angel Enrique Sacoto, Washington, D. C.
Andrew Constantine Sawchuk, Charleston, W. Va.
Enrique Schwarz, New York, N. Y.
Heinz-Otto Silbersiepe, Washington, D. C.
Clifford Sparow, Richmond
Anton Strohofer, Baltimore, Md.
Laszlo Szabo, Colonial Heights
Yasuo Takahaski, Richmond
Hooshang Tayebi, New York, N. Y.
Doris Lee Arnold Thurman, Durham, N. C.
Ekrem Suleyman Turan, Ft. Devens, Mass.
Zygmunt Wegielski, Petersburg
Edward Somers White, Bloxom
Derek William Williams, Roanoke

The following was licensed by endorsement of credentials:

Powell Evans Adams, Norlina, N. C.
Roy Ernest Albert, Alexandria
Samuel Wesley Atkins, Jr., Danville
Murray White Ballenger, Alexandria
Robert Anthony Ballou, Portsmouth
Frederick Bernard Becker, Portsmouth
Louis Goodno Britt, Wise
Donald L. Brummer, Richmond
Frank Wooldridge Buckner, Martinsville
Arthur Burgerman, Washington, D. C.

Richard Russell Chamberlain, Roanoke
Frederic Bridgham Champlin, Richmond
Frederick Andrew Clark, Jr., Richmond
Margaret Eleanor Crowder, Petersburg
Donald Herbert Cummings, Washington, D. C.
Jack Leon Derzavis, Arlington
Marshall Ernest Ditzler, Arlington
Frederick Young Donn, Washington, D. C.
Edward Charles Emerson, St. Paul, Minn.
George Carleton Evans, Phoebus
Blake Fawcett, Radford
Edward James Gallagher, Fairfax
Herbert Martin Griffin, Washington, D. C.
John F. Gillespie, Washington, D. C.
Julian Ira Gilliam, Roanoke
Charles William Grady, Roanoke
Ronald Lorne Hamilton, Binghamton, New York
Charles Edmund Hannan, Arlington
James Karr Hinton, South Boston
Anselm Charles Hohn, Harlan, Kentucky
Royce Eugene House, Kensington, Maryland
David Milford Hume, Richmond
Alfred Gadsden Johnson, Petersburg
James Andrew Kehoe, Washington, D. C.
Audrey Cox King, Richmond
Donald Perry King, Richmond
Rene Brown Ledbetter, Roanoke
John Kline Livingood, Herndon
John Oliver Martin, Falls Church
Eugene Arthur Mason, Williamsburg
James Robert McClelland, Arlington
John Tosh McLelland, Roanoke
Charles William Metcalf, Triangle
Clifton Malvin Moore, Norfolk
John Alphonsus O'Donnell, Washington, D. C.
Thomas Edward Padgett, Portsmouth
Seymour David Rockoff, Alexandria
Bertram Francis Schaefer, Washington, D. C.
Bettye Sue Corpening Schurter, Galax
Mildred Elizabeth Sheesley, Western Port, Md.
Luther Jerome Smith, II, Williamsburg
Daniel Sondheimer, Washington, D. C.
Bate Carpenter Toms, Jr., Martinsville
Arthur Alvin Turner, Norfolk
David Kimball Webster, Staunton
David Colwell Wherry, Alexandria
Wesley William Wieland, Staunton
Wallace Mason Yater, Washington, D. C.

The next meeting of the Virginia Board of Medical Examiners will be held at the Richmond Hotel, Richmond, June 12th. Examinations will be held June 13-15, inclusive.

Faculty Appointments.

The following faculty appointments have been announced for the School of Medicine, University of Virginia:

Dr. Howard Hicks Ashbury, Instructor in Neurology and Psychiatry.

Dr. Robert D. Gardner, Instructor in Neurology and Psychiatry.

Dr. Phyllis R. Ingram, Instructor in Surgery.

Dr. James E. John, Instructor in Pathology.

Dr. Morris A. Lambdin, Assistant Professor of Pediatrics.

Dr. James B. Littlefield, Instructor in Surgery.

Dr. Philip Beverly Peters, Richmond, part-time Instructor in Oral Surgery.

Dr. Donald Rathbun, Instructor in Neurology and Psychiatry, and Acting Director of the Seizure Control Clinic.

Dr. Richard Coffman, part-time Instructor in Surgery.

Dr. Burke McGuire Smith, Roanoke, Visiting Lecturer in Clinical Psychology.

Dr. Morton C. Wilhelm, Clinical Instructor in Surgery.

Dr. Ian Stevenson, one of the outstanding psychiatrists in the country, has been appointed Professor of Neurology and Psychiatry and chairman of the department of neurology and psychiatry, effective July 1st.

Dr. F. L. Angell,

Roanoke, has been named chairman of the professional services division of the Roanoke Valley Polio Eradication campaign. Dr. Harry G. Lockard, Jr., has been appointed as chairman of the physicians division.

Dr. Samuel Newman,

Danville, was recently named "Man of the Month" by The American Jewish Times-Outlook.

Surgeons Club.

Twenty four members of the Surgeons Club met in Richmond on April 11, 12 and 13 as the guests of Dr. Harry J. Warthen. The first morning was spent at the Richmond Memorial Hospital where a symposium on cancer was held.

Dr. George Crile Jr., Cleveland, gave his Philosophy in the Treatment of Cancer. Dr. James Barrett Brown, St. Louis, outlined the Surgery of Cancer Arising About the Head and Neck. Esophageal Cancer was reviewed by Dr. Charles B. Puestow, Chicago. Surgery in Cancer of the Lung was discussed by Dr. Richard H. Overholt, Boston. Dr. Howard Patterson, New York, and Dr. C. W. Mayo,

Rochester, described current therapy in Cancer of the Colon. In the absence of Dr. Richard B. Cattell of Boston, Cancer of the Pancreas was dealt with by Dr. Ralph Bowers, Memphis. Dr. Kraeer Ferguson, Philadelphia, spoke on Cancer of the Stomach. Dr. E. Lawrence Keys, St. Louis, and the Drs. Trimble, Baltimore, reviewed various aspects of Cancer of the Breast.

The afternoon of April 12 was spent at the McGuire VA Hospital where a surgical program was presented by Dr. Ralph MacDonald and members of the staff.

A morning program on April 13 was given by Dr. David Hume of the Medical College of Virginia and the surgical staff of that institution.

Dr. E. C. Joyner,

Suffolk, has been elected president of the Suffolk-Nansemond Tuberculosis and Health Association. He will hold office for two years.

Dr. Preston Titus

Was recently elected a vice-president of the Alexandria Community Health Center.

Dr. Donald Shotton

Has been named president of the Lynchburg Guidance Center.

Portrait of Dr. Dodson.

A portrait of Dr. A. I. Dodson, Sr., professor of urology at the Medical College of Virginia, has been presented to the College by former residents who trained under him. The portrait was presented during a dinner honoring Dr. Dodson. It was painted by Edmund Archer of Richmond.

Disposing of Unused Narcotics.

It has been brought to the attention of the Monthly that, except in a few instances, nursing homes which have in their possession a narcotic special tax stamp or which have left with them unused narcotics which were furnished by physicians attending patients, have not been properly disposing of said narcotics, upon release or demise of patient. It is suggested that nursing homes and physicians, who may be attached thereto, acquaint themselves with Article 196 of Regulation #5 governing the Harrison Narcotic Law.

Dr. William H. Barney,

Lynchburg, has been re-elected president of the Piedmont Heart Association.

Dr. Charles H. Sackett,

Lynchburg, has been appointed as plant physician for General Electric's Rectifier Department.

New Headquarters Building for S.M.A.

The Southern Medical Association will soon erect a modern headquarters office building in Birmingham. This will be a split-level structure, located on a nearly one acre lot on famed Highland Avenue at Niazuma. The first level will include a lobby, a room for the Woman's Auxiliary, reserve office space, storage rooms and mechanical equipment. The second level will consist of a second lobby-reception area, a conference-library room, executive offices, business offices, the editorial department of the Southern Medical Journal, and an employee lunchroom and lounge. It is expected that construction will start soon and the Association hopes to occupy the building during 1957.

The American-Korean Foundation

And the United States Army Medical Service have announced the discontinuation of their joint project of shipping medical books contributed by individual physicians, medical schools, hospital and state and local medical societies to Korea. Books should not be sent to the Sharpe General Depot in California as in the past for facilities no longer exist for packing and transshipping to Korea.

Over 77 tons of books, valued at $76,000, have been shipped to Korea for distribution to Korean medical schools.

The Gill Memorial Eye, Ear and Throat Hospital,

Roanoke, has just completed its Thirtieth Annual Spring Congress in Ophthalmology, Otolaryngology and allied specialties. The attendance was one of the largest in the history of the school, there being forty-two states and five foreign countries represented. The 1958 Congress will be held April 14-19.

Course in Postgraduate Gastroenterology.

The American College of Gastroenterology announces that its Annual Course in Postgraduate Gastroenterology will be given at The Somerset in Boston, October 24-26. Subject matter to be covered, from a medical as well as surgical viewpoint, will be essentially the advances in diagnosis and treatment, a comprehensive discussion of diseases of the mouth, esophagus, stomach, pancreas, spleen, liver and gallbladder, colon and rectum, with special studies of radiology and gastroscopy.

For further information and enrollment, write the College, 33 West 60th Street, New York 23.

The American Psychiatric Association

Has set up a project to study ways by which a

greater understanding of psychiatry can be conveyed to physicians in general practice. The project has been made possible by a grant from the National Committee Against Mental Illness. Ways must be explored to accomplish this—by setting up model post-graduate courses, developing standards for training, training films, course materials, and above all a broad promotional effort which will stimulate the general practitioner's interest in psychiatry and community action in this area.

American Board of Obstetrics and Gynecology.

Applications for certification, new and reopened, for the 1958 Part I examinations are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline date for receipt is September 1, 1957, and no applications will be accepted after that date.

Current bulletins outlining present requirements may be obtained by writing the secretary, Dr. Robert L. Faulkner, American Board of Obstetrics and Gynecology, 2105 Adelbert Road, Cleveland 6, Ohio.

Wanted.

Pediatrician to work with a group in a private hospital. Salary commensurate with ability. Please address your inquiry to #100, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Wanted.

Internist to join a group practicing in a 150 bed private hospital. Write #125, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Wanted.

Neurosurgeon to join group practice in a group of privately operated hospitals. Interested applicants address your inquiries to #150, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Wanted.

Radiologist to practice with a private group in a group of privately owned hospitals. If interested in this position, please write #175, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Association Wanted.

Otolaryngologist, 35, family, University trained, Board eligible August 1957, seeks association with individual or group in location near University. Available September 1957. Write to "Otolaryngologist", care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Wanted.

Two full time general practitioners or psychiatrists to work on psychiatric service of 2000-bed hospital, in medical and cultural locality. Full-time salary range $6,000 to $10,320 (plus 25% for certification) with retirement, insurance, leave and other government benefits. Citizenship and license by some state required. Contact Manager, VA Hospital, Roanoke 17, Va. (*Adv.*)

Obituaries . . . .

Dr. John Robert Bagby,

Pulaski, died March 20th at the age of eighty-eight. He received his medical degree from the University of Maryland in 1893. Dr. Bagby began his medical practice in Buckingham County and later served as health officer of the Port of Newport News. He had been at Pulaski since 1932. Dr. Bagby was a Life Member of The Medical Society of Virginia, having joined in 1894.

Two step-daughters survive him.

Dr. Brewster Arthur Hopkins,

Well known physician of Stuart, died March 21st, following a heart attack. He had been in poor health for several years. Dr. Hopkins was fifty-three years of age and a graduate of the Medical College of Virginia in 1929. He was prominent in community affairs, having served as medical examiner for Patrick County, a past patron of the Stuart Eastern Star, and a past president of the Stuart Rotary Club. He also served as a member of the Medical Advisory Committee of the Virginia Tuberculosis Association. Dr. Hopkins was a past president of the Virginia Academy of General Practice and had been a member of The Medical Society of Virginia for twenty-seven years.

His father, two sisters and four brothers survive him.

Dr. John Roland Ellison, Jr.,

Prominent Suffolk physician, was drowned April 6th when a small boat capsized during a fishing expedition on Lake Drummond in the Dismal Swamp. He was fifty-three years of age and a graduate of the Medical College of Virginia in 1927. Dr. Ellison was very active in civic affairs, having

served on the school board, and was a prominent member of the Suffolk Shrine Club. He specialized in orthopedic surgery, was president of the Lakeview Clinic and chief of the staff at Obici Memorial Hospital. Dr. Ellison had been a member of The Medical Society of Virginia since 1939 and was a founder and past president of the Tri-County Medical Society.

His mother, wife, a son and a daughter survive him.

An editorial in the Suffolk News-Herald stated: "There never seemed to be any people who were great or small to Roland Ellison. There was equality of treatment for the poor or the rich, for friend or an unknown. While he was a skilled physician and surgeon, we believe that those who went to him for care gained almost as much from his kindly, humorous manner as they did from his professional treatment. From the lasting memory which he has created in the home town which he knew and loved so well, we all might learn an invaluable lesson. Tremendous good and happiness can be brought to people by a kind word, a pleasant manner and a little spice of humor. Great deeds may be forgotten, but a personality which enriches the lives of others will never vanish from memory."

Dr. Clarence Edward Arnette,

Prominent Alexandria physician, died May 12th after a long illness. He was stricken with a brain tumor last July and had been confined to the hospital since that time. Dr. Arnette was fifty-two years of age and a graduate of the Medical College of Virginia in 1934. He had practiced in Alexandria since his graduation. Dr. Arnette was the founder of the Emory and Henry College Alumni Association and was active in the Masonic order. He had been a member of The Medical Society of Virginia for twenty years.

His wife, a son and a daughter survive him.

Dr. Ernest Lee Copley,

Well-known Richmond doctor, was drowned on May 12th. He was a native of Lunenburg County and sixty-eight years of age. Dr. Copley graduated from the Medical College of Virginia in 1929 and had practiced in Richmond since that time. Before going to medical school, Dr. Copley was an ordained Methodist minister, having graduated from Yale Divinity School in 1918. He was a Mason and past master of Westhampton Lodge. He had been a member of The Medical Society of Virginia since 1938.

His wife and two sons survive him.

Dr. Daniel Yuter,

Well known Alexandria physician, died March 13th, having suffered a coronary occlusion in February. He was a native of Baltimore and forty-two years of age. Dr. Yuter received his medical degree from the University of Virginia in 1941. After serving with the Medical Corps during World War II, he began his practice in Alexandria in 1946. Dr. Yuter was a past secretary of the Alexandria Medical Society and served on its executive committee. He was a member of The Medical Society of Virginia.

His wife and two sons survive him.

Dr. Jamison.

It is with deep regret that we note the passing of our friend and colleague, Dr. Euell C. Jamison, Rocky Mount, Virginia. Dr. Jamison had practiced medicine in Rocky Mount for almost 30 years except for service in the United States Air Force Medical Corps during World War II. He was released from active duty before the end of the war because of the acute shortage of physicians in Franklin County. The territory was so large that he was unable to cover all the territory so he established a clinic to which patients were brought by ambulance for a distance of twenty-five to thirty miles. Some were treated and returned home by the same ambulance that brought them, others were kept at the clinic until safe to return home. He continued this work until the Franklin County Hospital was built. Although ill for three or four years he continued his practice whenever able to do so until a few months before his death.

In addition to his medical practice he was active in both community and church work. He was a member of Town Council, a director in the local bank and a deacon in Rocky Mount Baptist Church.

To those of us who were privileged to know Dr. Jamison, it was to find in him a true and loyal friend and colleague. He was modest, kind, considerate and slow to criticize. Moreover, he was kind and a loving father and a devoted and faithful husband. Furthermore he was a practicing Christian.

Therefore Be It Resolved that the members of the Roanoke Academy of Medicine mourn his untimely passing and extend deepest sympathy to his widow, his children and the other members of his family and,

Be It Further Resolved that this resolution be sent to Mrs. Ella Jamison, a copy placed in the minutes of the Roanoke Academy of Medicine and a copy be sent to the Virginia Medical Monthly.,

C. D. Nofsinger, M.D.
S. Beverly Cary, M.D.
Samuel F. Driver, M.D., *Chairman*

Dr. Vorbrinck.

On February 13, the Norfolk County Medical Society lost, through death, one of its most beloved members, Doctor Thomas M. Vorbrinck. "Tommy" as he was affectionately known by most of us, was born in Henrico County on April 19, 1892. After attending the local schools he enrolled in the Sacred Heart Academy of

Salisbury, North Carolina, graduating in 1913. He then entered the Medical College of Virginia receiving the degree of Doctor of Medicine in 1917. With many members of his class, he was commissioned a First Lieutenant in the Medical Corps of the Army, where he served until after the war and was discharged from active duty with the rank of Captain. He continued in the Reserve Corps for a number of years and finally was commissioned a Lieutenant Colonel.

After completing his tour of active duty in the Army, late in 1918, he came to Norfolk and became an intern at St. Vincent's Hospital. At the end of his hospital training he began the practice of medicine in Norfolk and continued in this field until his death, a period of thirty-eight years of active practice. He was a member of The Medical Society of Virginia, the American Medical Association and the American Academy of General Practice.

This, in brief, is a biographical sketch of Dr. Vorbrinck, but it tells little of the man as we knew him. His outstanding characteristics were gentleness and kindness. He spoke ill of no man and loved all his fellow-men. No matter how dark the day, how trying the times, he ever wore a smile. He was never heard to raise his voice in anger. If he ever had troubles, his friends were never burdened with them. On the golf course he was a delightful companion.

Dr. Vorbrinck had a large practice. With his patients he worked diligently and faithfully, often without remuneration. All were treated alike. His hours of work were long and he gave of himself all that was in him, never grumbling, always smiling. No wonder that he was so beloved by them. It can truly be said, but to know him was to love him.

We will miss "Tommy", a good physician, a true friend, a most congenial companion.

Therefore Be It Resolved, that these resolutions be spread upon the pages of the minutes of the Norfolk County Medical Society and copies be sent to Mrs. Vorbrinck and the Virginia Medical Monthly.

Dr. Albert Horton
Dr. William Arthur Porter
Dr. A. A. Burke
Dr. A. Brownley Hodges, *Chairman*

Dr. Turner.

Dr. Algernon K. Turner, physician of Roanoke County, died at the age of 51 on January 23, 1957, after an illness of several weeks.

Dr. Turner graduated from the School of Medicine of the University of Virginia. After internship in Boston, he entered general practice in Martinsville, Virginia. Several years later, he opened a clinic in southwest Roanoke County which he gradually expanded.

Dr. Turner contributed greatly to the health and happiness of his patients, who were spread through southern Roanoke County and in Floyd and Franklin Counties. As a good country doctor, he ably filled the needs of a large area.

Dr. Turner's death has left behind a host of devoted patients who feel that there is a void that can never be filled. His passing is a great loss to the community and to the medical profession of Roanoke and environs.

Be It Therefore Resolved, that the Roanoke Academy of Medicine record in its minutes our sorrow of the passing of Dr. Turner and that a copy of this resolution be entered in the minutes of the Society, a copy forwarded to the family of the deceased and a copy sent to the Medical Society of Virginia.

Dr. L. C. Spengler
Dr. R. C. Crawford
Dr. H. H. Trout, Jr., *Chairman*

Dr. Dickerson.

This community was shocked and saddened by the sudden and premature death of Dr. William E. Dickerson, age 58. He was born at Appomattox, on September 19, 1898, son of the late Mr. and Mrs. W. E. Dickerson, Sr. His parents moved to Danville when he was a child. It was here he grew up, attended grammar school and high school—graduating in 1916. In 1916 he entered the University of Richmond where he took his academic courses in pre-medicine. In 1919 he matriculated at the Medical College of Virginia and graduated in 1923. Following graduation he served one year internship at the Retreat for the Sick. Following this service he came to his native town and practiced general medicine for two years. Then he moved to West Virginia where he did general practice for eight years. He then went to New York and specialized in Eye, Ear, Nose and Throat. Following this period of specialization he returned to Danville and specialized for twenty-two years in the practice of Eye, Ear, Nose and Throat. During this period he was able as always to make friends both with the laity and profession. He was loved by his friends and admired by everyone because of his fine sense of human feeling for his fellows.

During World War II he volunteered for service and was in Europe a good portion of the War. He gave a good account of himself during this unselfish service.

During his student days he was a very active athlete and was always regarded as one of the finest small athletes of his time. The late Coach Dobson said of him, "Dick is a scholar and a gentleman of the first order." All of us can say this with pleasure and pride.

Dr. Dickerson was married twice. By his first marriage he had one child, Johnny Dickerson, who is now in his third year of medicine at the Medical College of Virginia. Johnny's mother died some several years ago and his father married a second time. Mrs. Cecil Dickerson survives Dr. Dickerson along with his son and one grandchild. It was a great satisfaction to see the Doctor admire his grandchild the last afternoon he lived especially since it was the first time he had seen it.

The profession, with friends and neighbors and family, mourn the loss of a fine fellow in the practice of medicine in this community. Already many people have expressed their appreciation for the fine service he had rendered them personally. All of us would do well to emulate him.

Be It Resolved that this memorial be spread upon the minutes of the General Staff of The Memorial Hospital, Danville-Pittsylvania Academy of Medicine and copies be sent to the Monthly and to the family.

Dr. Henry J. Langston, *Chairman*
Dr. M. H. McClintic
Dr. E. B. Robertson

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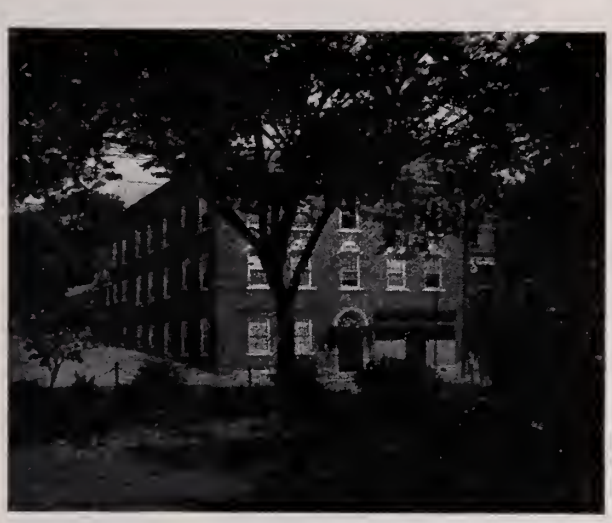
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The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, June 12, 1957. The examinations will be held in the same hotel June 13, 14, and 15, 1957, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before May 28, 1957. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S.W., Roanoke, Virginia.

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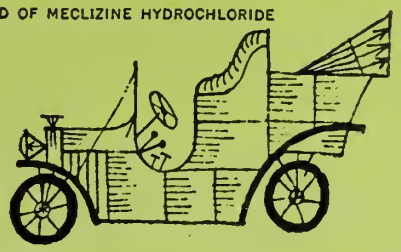
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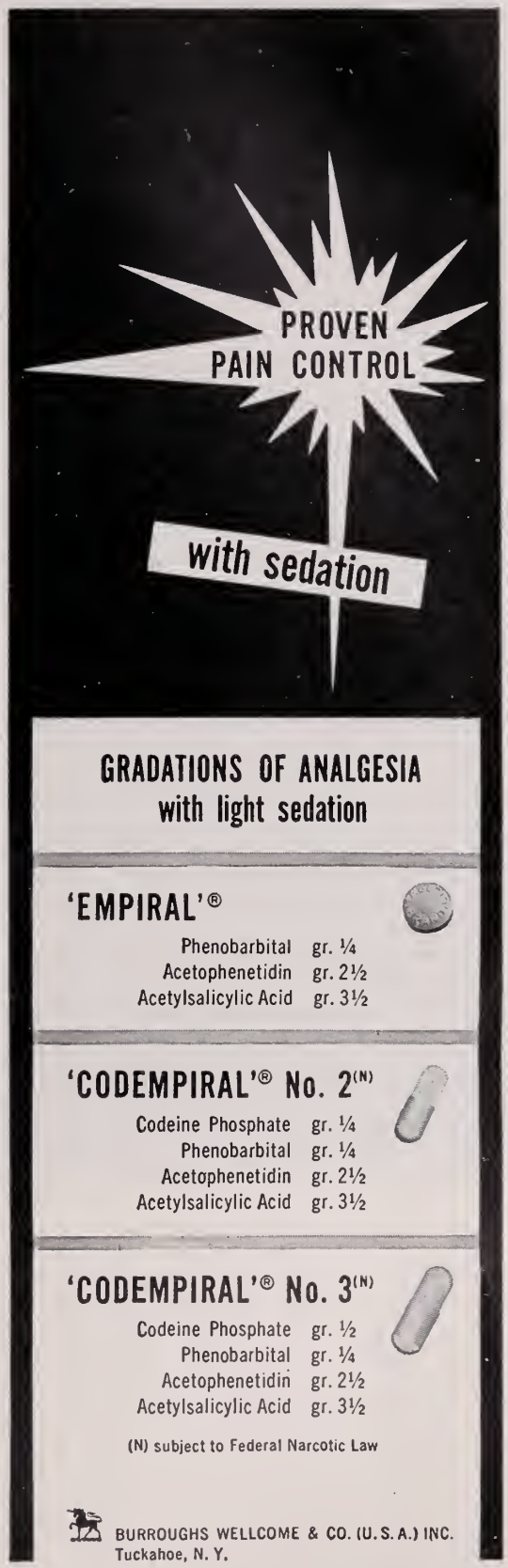
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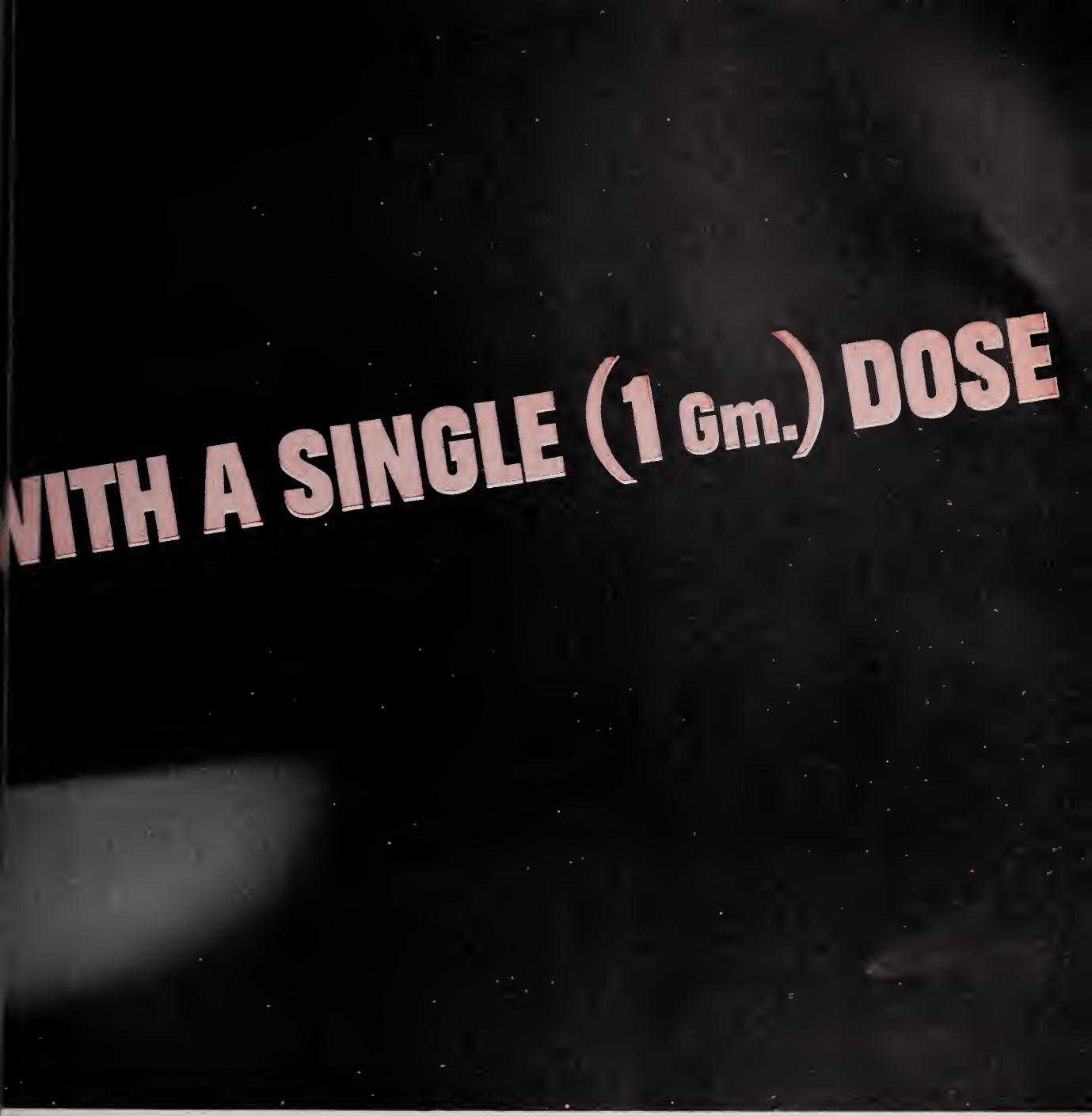


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1. Boger, W. P.; Strickland, C. S.; and Gylfe, J. M.: Antibiot. Med. & Clin. Ther. 3:378 (Nov.) 1956.

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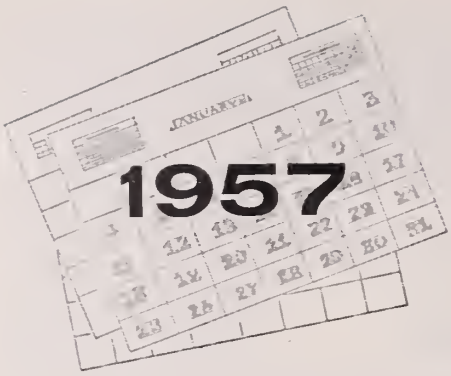
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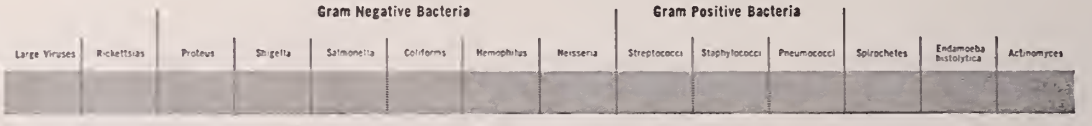
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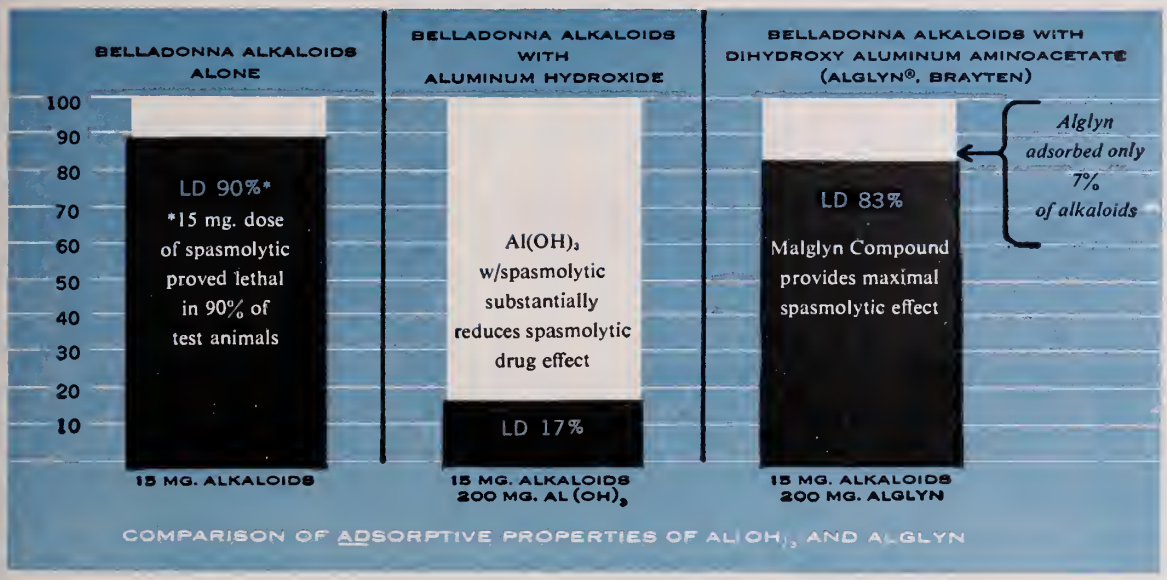
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Safety—plus marked clinical effectiveness

Harmonyl proved particularly effective, for example, in tranquilizing a group of 40 chronically ill, agitated senile patients.[1]

Of particular interest is the observation that patients became more lucid and alert on Harmonyl therapy. And there was a complete absence of side effects with Harmonyl—although a similar group on reserpine developed such side effects as anorexia, headache, bizarre dreams, shakes, nausea and vomiting.

Following another eight-month study of chronic, hospitalized mental patients, Ferguson[2] stated:

- Harmonyl benefited at least 15% more overactive patients and proved more potent in controlling aggression—requiring only one-half to two-thirds the dosage of reserpine.
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Ferguson concluded: "*The most notable impressions were the absence of side effects and relatively rapid onset of action with Harmonyl.*"

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Professional literature is available upon request. Harmonyl is supplied in 0.1-mg., 0.25-mg., and 1-mg. tablets. Abbott

References: 1. Communication to Abbott Laboratories, 1956. 2. Ferguson, J. T.: Comparison of Reserpine and Harmonyl in Psychiatric Patients: A Preliminary Report, Journal Lancet, 76:389, December, 1956. *Trademark

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Salicylates	✓	✓			
Muscle relaxants			✓1		
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Steroids	✓	✓			
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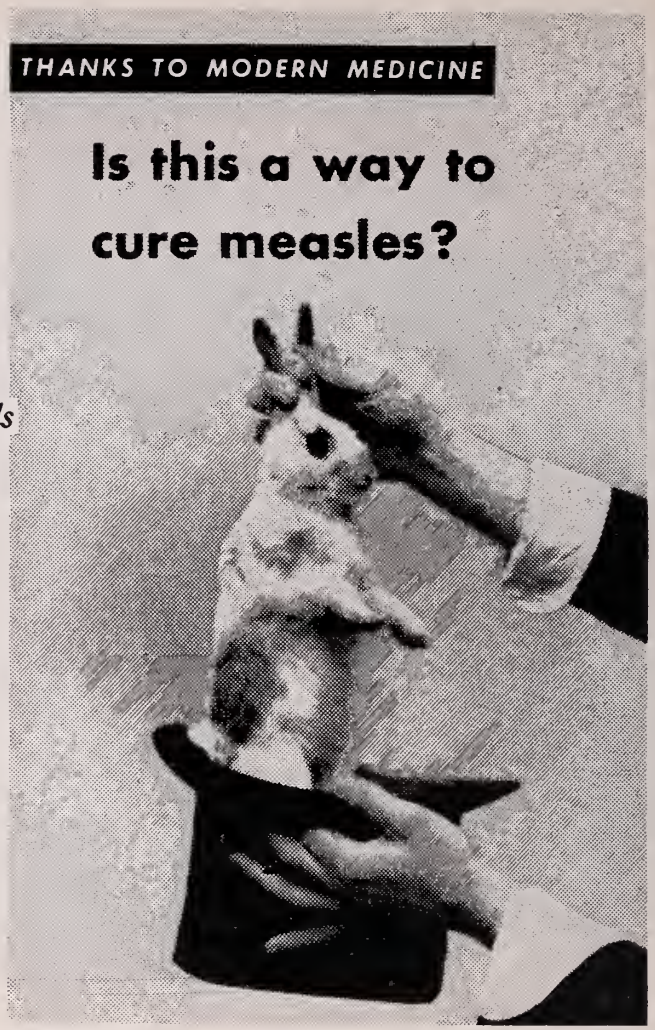
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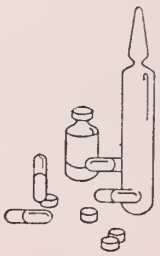


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(1) Holt, J. O. S., Jr.: Dallas Med. J. 42:497, 1956. (2) Gelvin, E. P.; McGavack, T. H., and Kenigsberg, S.: Am. J. Digest. Dis. 1:155, 1956. (3) Natenshan, A. L.: Am. Pract. & Digest Treat. 7:1456, 1956.

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Seek a friend's advice, if you wish, on almost any other problem. But when it comes to your health, and that of your family, by all means don't let anyone other than a physician advise you.

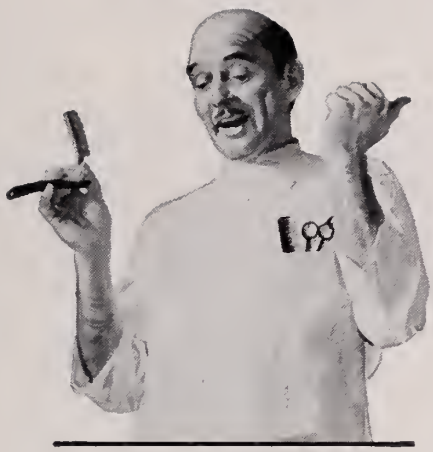
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* This advertisement appears in the June 17th issue of Life: circulation more than 5½ million; total readership, over 15 million.

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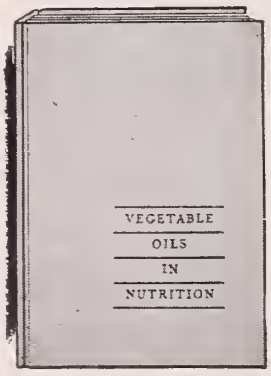
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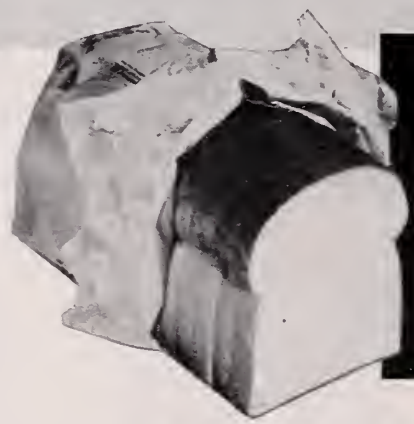
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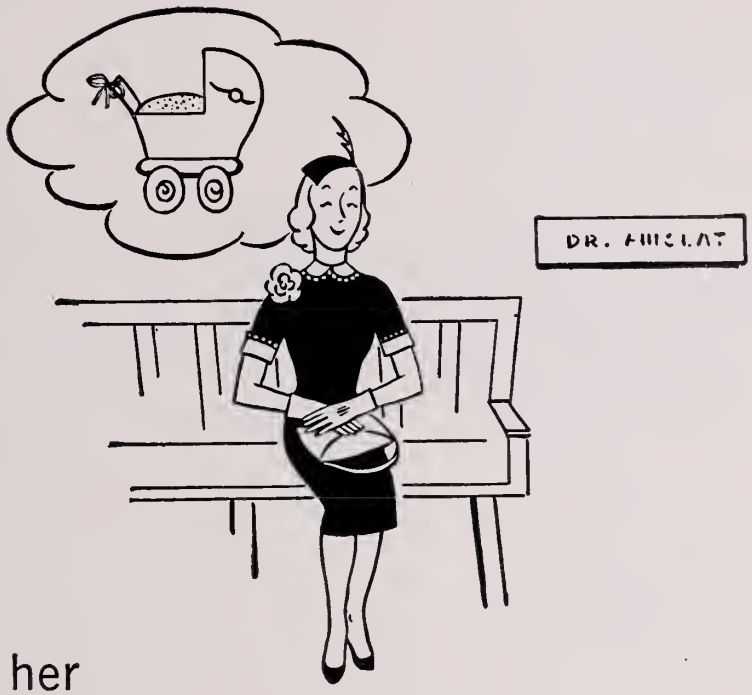
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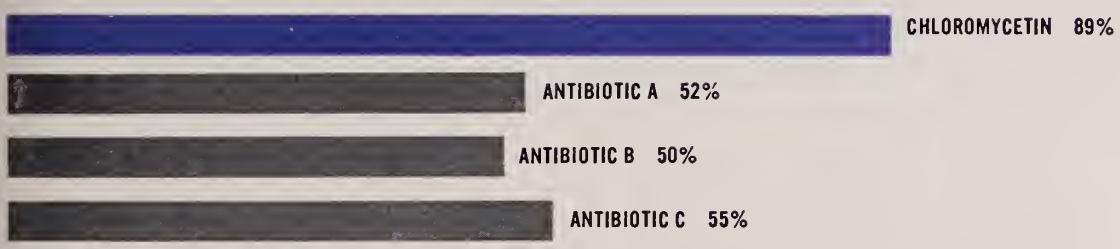
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Elemental Iron	38 mg.
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Thiamine mononitrate	1.0 mg.
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Alcohol content: 12 per cent

Dosage: 1 or 2 teaspoonfuls t.i.d.

Supply: Bottles of 8 ounces and 1 pint.

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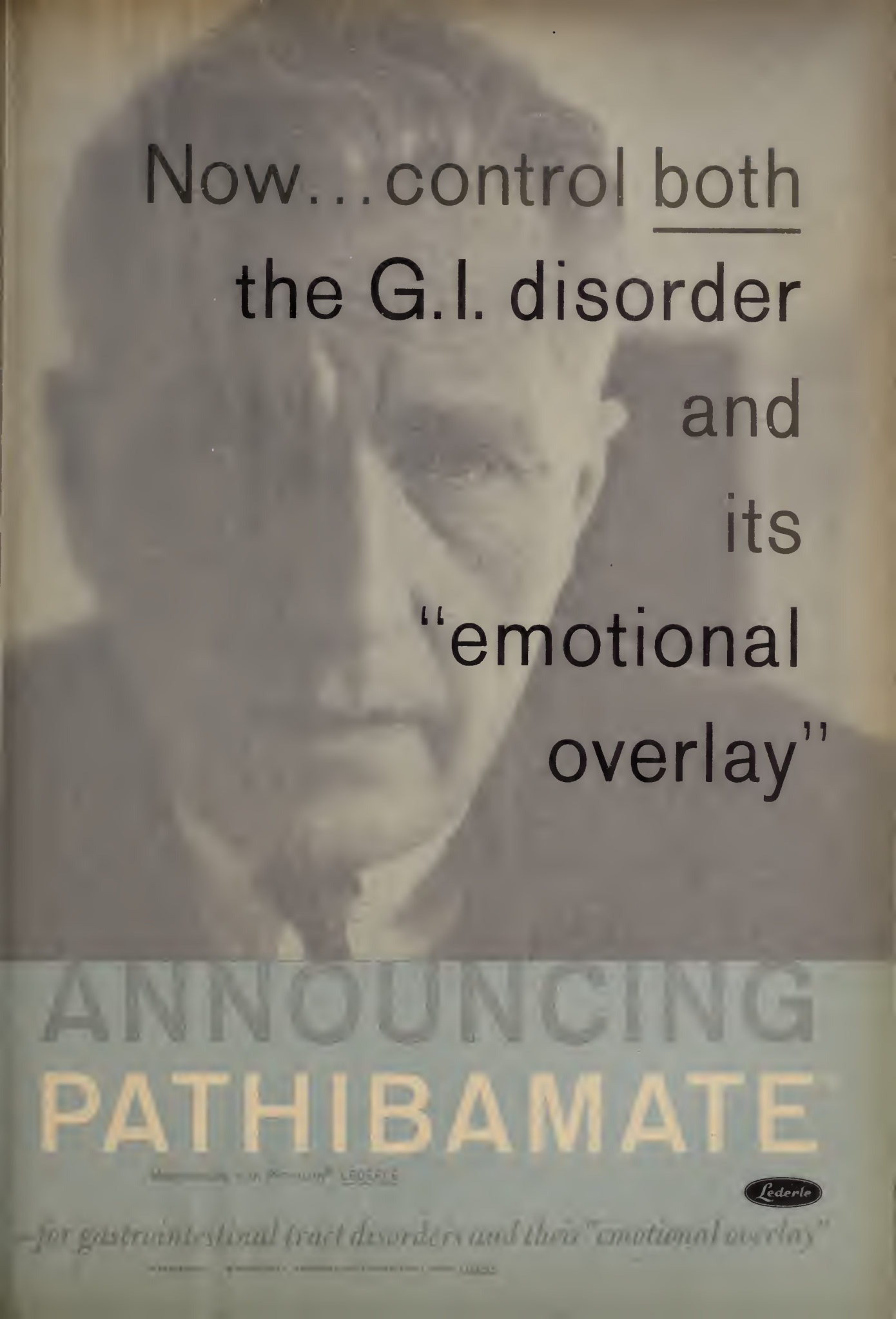


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and
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"emotional
overlay"
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PATHIBAMATE
Lederle
-for gastrointestinal tract disorders and their "emotional overlay"

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Meprobamate with PATHILON® LEDERLE

–for gastrointestinal tract disorders and their "emotional overlay"

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PATHIB

combines **Meprobamate** *(400 mg.):*

Widely prescribed tranquilizer-muscle relaxant. Effectiveness in anxiety and tension states clinically demonstrated in millions of patients. Meprobamate acts only on the central nervous system. Does not increase gastric acid secretion. It has no known contraindications, can be used over long periods of time.[1,2,3]

with **Pathilon** *(25 mg.):*

An anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of G.I. tract disorders. In a comparative evaluation of currently employed anticholinergic drugs, PATHILON ranked high in clinical results, with few side effects, minimal complications, and few recurrences.[4]

Now...with PATHIBAMATE*...you can control disorders of the digestive tract and the "emotional overlay" so often associated with their origin and perpetuation...without fear of barbiturate loginess, hangover or addiction. Among the conditions which have shown dramatic response to* PATHIBAMATE *therapy:*

DUODENAL ULCER • GASTRIC ULCER • INTESTINAL COLIC
SPASTIC AND IRRITABLE COLON • ILEITIS • ESOPHAGEAL SPASM
ANXIETY NEUROSIS WITH G.I. SYMPTOMS • GASTRIC HYPERMOTILITY

AMATE

Comments on PATHIBAMATE *from clinical investigators*

• "I find it easy to keep patients using the drug continuously and faithfully. I feel sure this is due to the desirable effect of the tranquilizing drug."[5]

• "The results in several people who were previously on belladonna-phenobarbital preparations are particularly interesting. Several people volunteered that they felt a great deal better on the present medication and noted less of the loginess associated with barbiturate administration."[6]

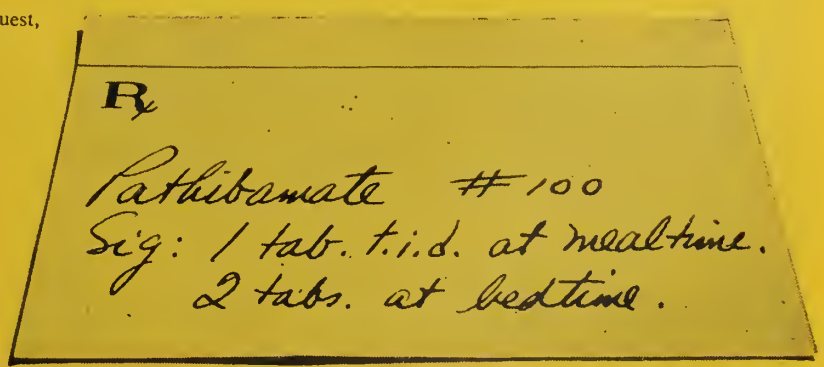
• PATHIBAMATE..."will favorably influence a majority of subjects suffering from various forms of gastrointestinal neurosis in which spasmodic manifestations and nervous tension are major clinical symptoms."[7]

• "In the patients with functional disturbances of the colon with a high emotional overlay, this has been to date a most effective drug."[5]

ferences: 1. Borrus, J. C.: *M. Clin. North America,* ress, 1957. 2. Gillette, H. E.: *Internat. Rec. Med. & G. P.* . 169:453, 1956. 3. Pennington, V. M.: *J.A.M.A.,* ress, 1957. 4. Cayer, D.: Prolonged Anticholinergic rapy of Duodenal Ulcer. Am. J. Dig. Dis. 1:301-309 y) 1956. 5. McGlone, F. B.: Personal Communication to erle Laboratories. 6. Texter, E. C., Jr.: Personal nmunication to Lederle Laboratories. 7. Bauer, H. G. McGavack, T. H.: Personal Communication ederle Laboratories.

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"PREMARIN"® + MEPROBAMATE

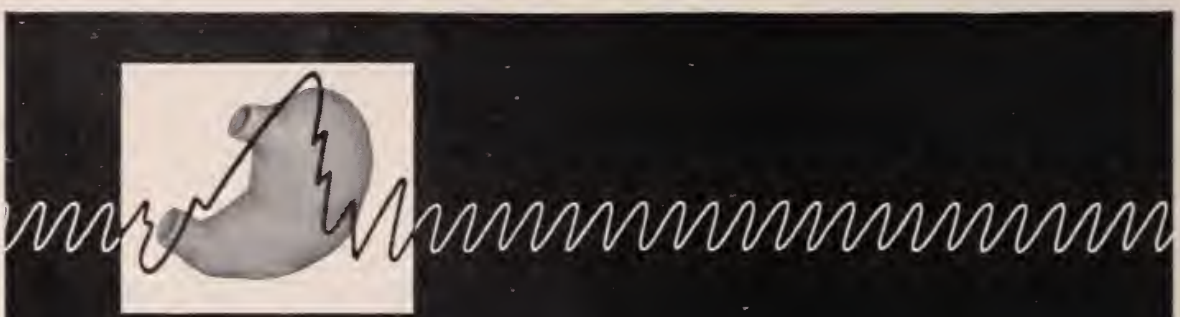
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- *is an effective dual antispasmodic*
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If your overweight patient can resist the temptation to buy high calorie snacks, he's well on the road to successful weight reduction. You will find that one Dexedrine* Spansule sustained release capsule taken in the morning controls appetite all day long—both at mealtimes and in the supermarket.

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once every 10-12 hours and for all codeine uses

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CODEINE Phosphate	48.6 mg. (¾ gr.)	97.2 mg. (1½ gr.)
Hyoscyamine Sulfate	0.3111 mg.	0.3111 mg.
Atropine Sulfate	0.0582 mg.	0.0582 mg.
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Current Practices in Dietary Management of

Infant Allergies

Infants are not born hypersensitive but may develop hypersensitivity to foodstuffs shortly after birth. The earliest sensitizations are likely to be to milk, wheat, eggs and orange juice, with which contact is established early in life. Heredity is usually a dominant factor in the tendency of infants to develop allergy. Infants with a family history of both paternal and maternal allergy tend to develop clinical symptoms earlier than those with unilateral inheritance. Both the allergen and the symptom in the infant may be different from those of the father or mother.

Allergic disorders of infants include gastrointestinal disturbances, infantile eczema, urticaria and asthma. Gastrointestinal allergy may be manifested by vomiting, colicky abdominal pain and diarrhea. Allergic dermatitis may be evidenced by wheal-like cutaneous reactions which may develop into exudative lesions over the scalp, face and body. A systemic food hypersensitivity may produce an asthmatic response manifested by dyspnea and wheezing, although infection is usually associated with this type of response.

Common treatments include avoidance of the allergen, desensitization, antihistaminics and, in the presence of infection, antibiotics. Infants sensitive to the proteins of cow's milk whey may be fed human, goat or mare's milk reinforced with KARO® Syrup. Casein-sensitive infants may be offered soybean milk or amino acid mixtures reinforced with KARO Syrup.

The same problems of infant feeding recur from generation to generation, but solutions may differ with each era. The carbohydrate requirement for all infants is as completely fulfilled by KARO Syrup today as a generation ago. Whatever the type of milk adapted to the individual infant, KARO Syrup may be added confidently because it is a balanced mixture of low molecular weight sugars, readily miscible, well tolerated, palliative, hypo-allergenic, resistant to fermentation in the intestine, easily digestible, readily absorbed and non-laxative. KARO is readily available in all food stores.

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FOR ALLERGIC INFANTS

24-hour formulas made with hypoallergenic milk and KARO Syrup

WHOLE GOAT'S MILK FORMULAS

Age Months	Fluid Milk Fluid Oz.	Water Oz.	KARO Tbsp.	Each Feeding Oz.	No. of Feedings in 24 Hrs.	Total Calories
Birth	10	10	2	3	6	320
1	12	13	2½	4	6	390
2	15	13	3	4½	6	480
3	17	9	3	5	5	520
4	20	11	3½	6	5	610
5	23	11	4	6½	5	700
6	26	10	4	7	5	760
7	28	11	3	7½	5	740
8	30	11	2½	8	5	750
10	32	9	2	8	5	760

EVAPORATED GOAT'S MILK FORMULAS

Age Months	Weight Lbs.	Evap. Goat's Milk Oz.	Water Oz.	KARO Tbsp.	Each Feeding Oz.	No. of Feedings in 24 Hrs.	Total Calories
Birth	7	6	12	1	3	6	290
1	8	8	15	2	4	6	395
2	10	9	14	3	4½	5	520
3	12	10	15	3½	5	5	590
4	14	12	18	4	6	5	695
5	16	12	21	4	6½	5	695
6	17	13	22	4	7	5	730
7	18	14	21	3	7	5	710
8	19	15	20	2	7	5	690
10	21	16	16	1	8	4	730

LIQUID SOY MILK FORMULAS

Age Months	Evap. Milk Fluid Oz.	Water Oz.	KARO Tbsp.	Each Feeding Oz.	No. of Feedings in 24 Hrs.	Total Calories
Birth	6	12	2	3	6	380
1	8	16	3	4	6	532
2	9	14	3	4½	5	576
3	10	15	3½	5	4	650
4	12	18	4	6	5	768
5	12	21	4	6½	5	768
6	13	22	4	7	5	768
7	14	21	3	7	5	736
8	15	20	2	7	5	730
10	16	16	1	8	4	704

DRIED SOY MILK FORMULAS

Age Months	Dry Milk	Water Oz.	KARO Tbsp.	Each Feeding Oz.	No. of Feedings in 24 Hrs.	Total Calories
Birth	6	20	2	3	7	360
1	8	22	2	4	6	440
2	9	24	2½	4	6	510
3	10	29	3	6	5	580
4	12	33	3½	7	5	690
5	13	33	3½	7	5	730
6	14	33	3½	7	5	740
7	14	33	2½	7	5	710
8	15	33	2	7	5	720
10	15	33	2	8	4	720



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among nonhormonal antiarthritics...
unexcelled in
therapeutic potency

BUTAZOLIDIN®

(phenylbutazone GEIGY)

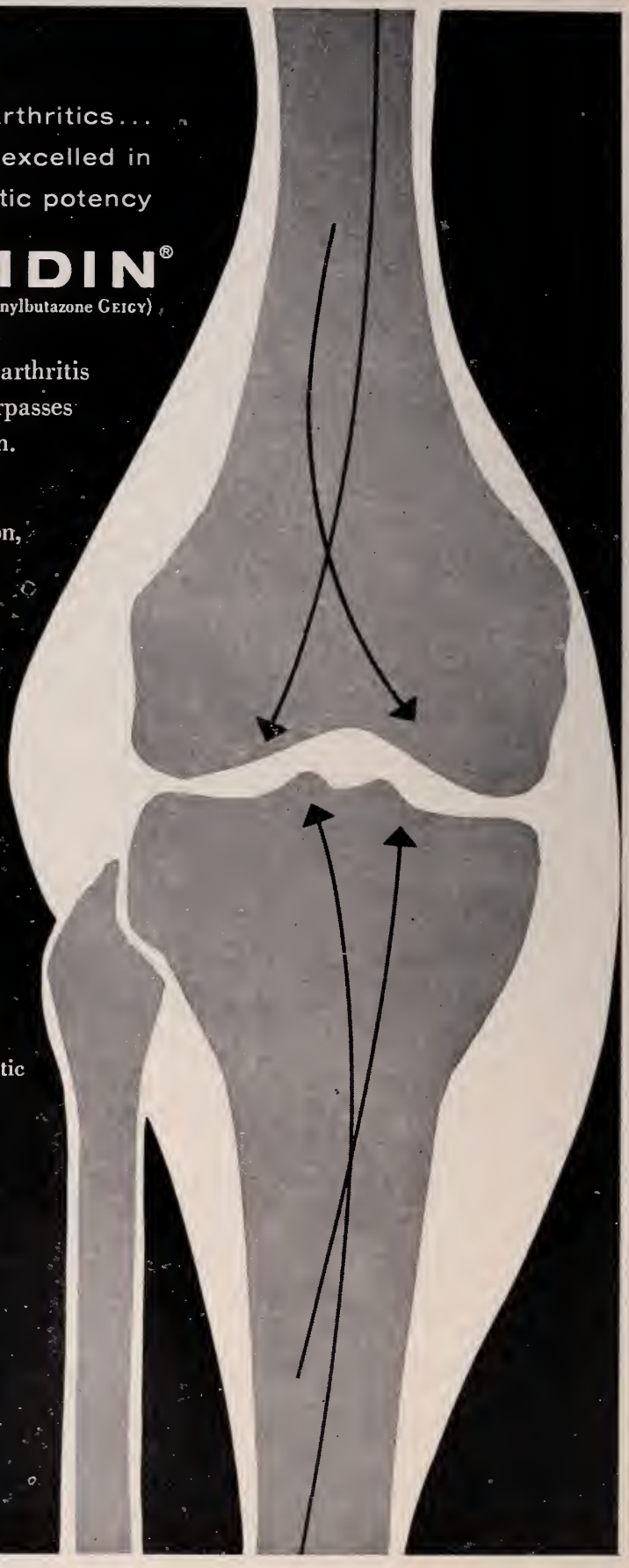
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Its well-established advantages include remarkably prompt action, broad scope of usefulness, and no tendency to development of drug tolerance. Being nonhormonal, BUTAZOLIDIN causes no upset of normal endocrine balance.

BUTAZOLIDIN relieves pain, improves function, resolves inflammation in:
Gouty Arthritis
Rheumatoid Arthritis
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Painful Shoulder Syndrome

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for detailed literature before instituting therapy.

BUTAZOLIDIN® (phenylbutazone GEIGY). Red coated tablets of 100 mg.



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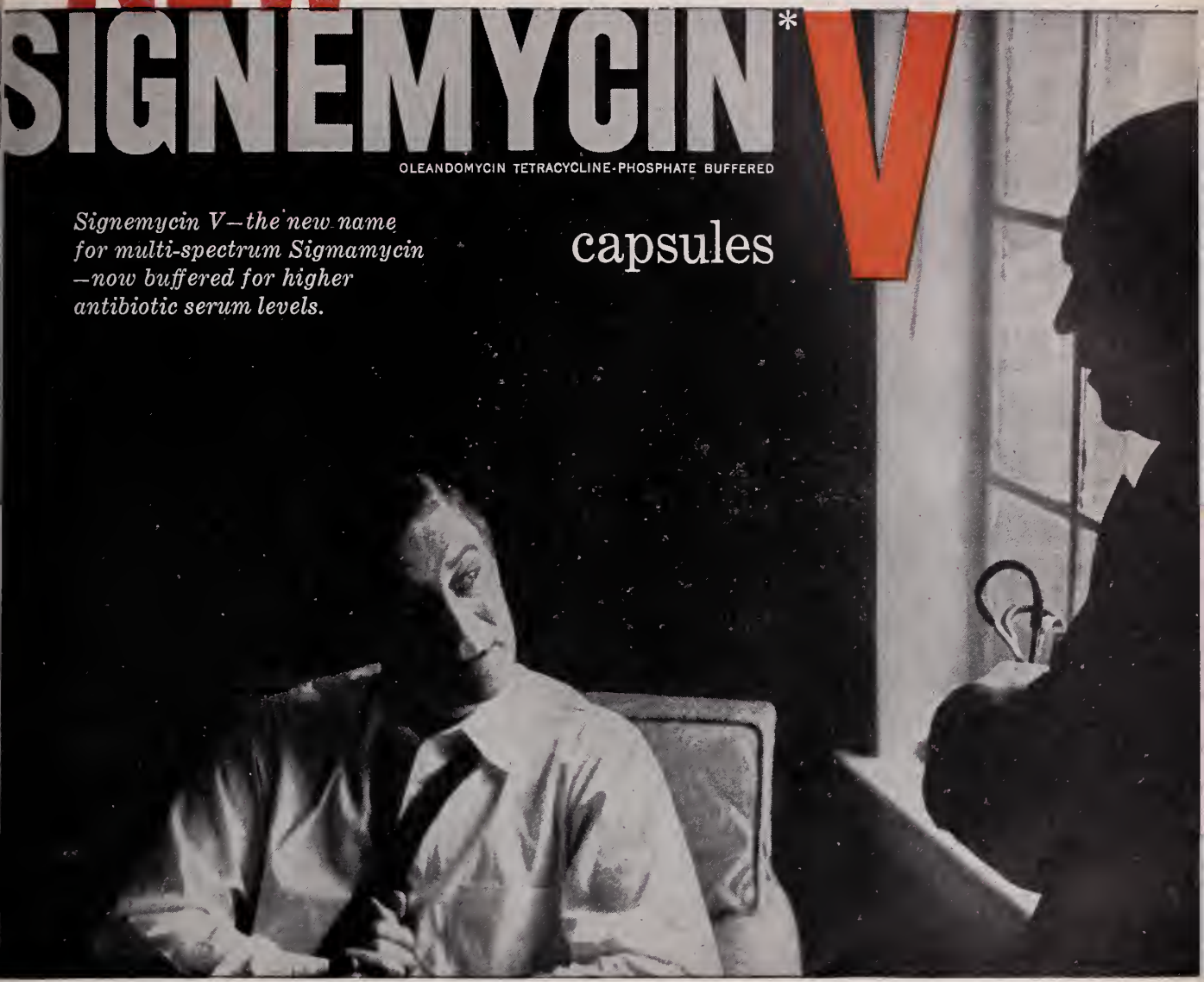
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capsules

Signemycin V—the new name for multi-spectrum Sigmamycin —now buffered for higher antibiotic serum levels.



New added certainty in antibiotic therapy —particularly for that 90% of the patient population treated at home or office where susceptibility testing may not be practical.

Signemycin V Capsules provide the unsurpassed antimicrobial spectrum of tetracycline extended and potentiated to include even those strains of staphylococci and certain other pathogens resistant to other antibiotics. The addition of the buffering agent affords higher, faster antibiotic blood levels following oral administration.

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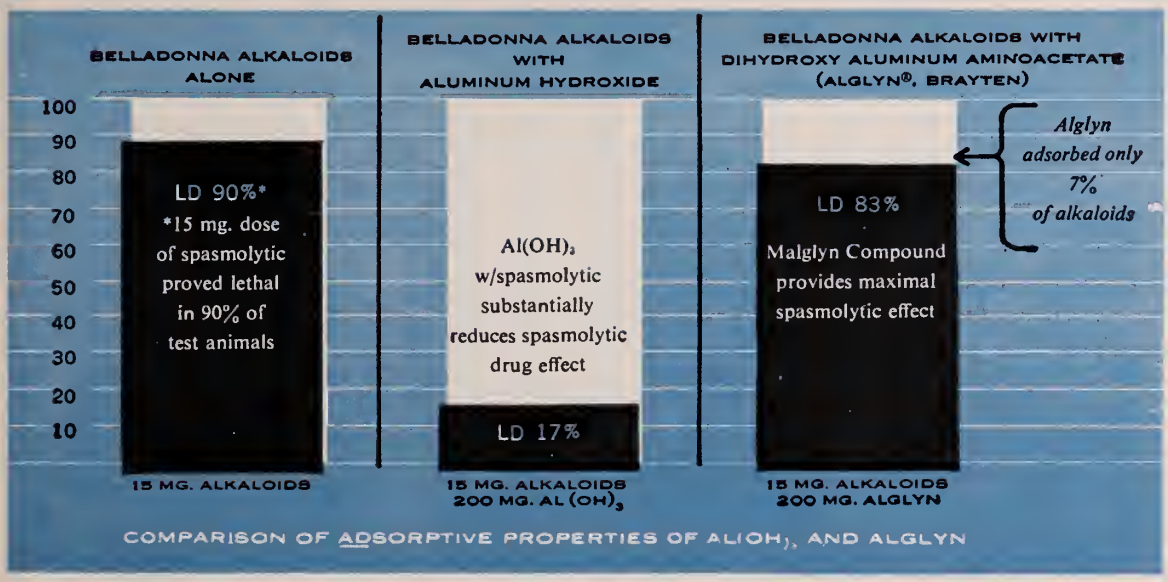
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(dihydroxy aluminum aminoacetate with belladonna alkaloids and phenobarbital)

no wonder . . .

It's no wonder that of the many antacid-spasmolytic formulations promoted to the medical profession, so many physicians have found MALGLYN the most consistent in clinical effectiveness.

Here's a startling adsorption story involving simultaneous administration of antacid and spasmolytic drugs!



The above laboratory study clearly indicates that the antacid ALGLYN, contained in the MALGLYN formula, does not materially interfere with the therapeutic effectiveness of its contained belladonna alkaloids. On the other hand, the marked *ad*sorptive properties of aluminum hydroxide renders its combination with belladonna alkaloids both uneconomical and therapeutically unreliable.

For both rapid and prolonged antacid effect, with consistently effective spasmolytic and sedative action, rely upon MALGLYN for treatment of peptic ulcer and epigastric distress.

each tablet contains

dihydroxy aluminum aminoacetate, N.N.R.	0.5 GM.
belladonna alkaloids (as sulfates)	0.162 MG.
phenobarbital	16.2 MG.

Also supplied: ALGLYN® (dihydroxy aluminum aminoacetate, N.N.R. 0.5 Gm per tablet). BELGLYN® (dihydroxy aluminum aminoacetate, N.N.R., 0.5 Gm. and belladonna alkaloids, 0.162 mg. per tablet).

Specialities for the Medical Profession only

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Meat...

and Protection Against Hypochromic Anemia

Hypochromic anemia, the most common nutritional deficiency in children in the United States, occurs most frequently in the second six months after birth.[1] A major cause of anemia in early infancy may arise from insufficient transfer of iron from the mother to the fetus,[2] since anemia is not uncommon in pregnant women.

A first step, then, toward prevention of hypochromic anemia in the infant is the provision of a prenatal diet rich in available iron and in high quality protein. A second and most important step is the addition of foods high in utilizable iron (egg yolk, sieved meat and vegetables) to the infant's daily diet as early as possible (usually 3 months after birth).[1]

Meat contributes valuable amounts of anabolically effective protein, B vitamins, readily available iron, and other minerals to the nutrition of the pregnant and lactating woman. The feeding of sieved meat to infants after the third month provides well-utilized iron and aids in the prevention of hypochromic anemia.

---

1. Jackson, P. L.: Iron Deficiency Anemia in Infants, Editorial, J.A.M.A. *160*:976 (Mar. 17) 1956.
2. Martin, E. A.: Roberts' Nutrition Work with Children, Chicago, The University of Chicago Press, 1954, p. 211.

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. . . because among all Rauwolfia preparations Rauwiloid (alseroxylon) is maximally effective and maximally safe . . . because least dosage adjustment is necessary . . . because the incidence of depression is less . . . because up to 80% of patients with mild labile hypertension and many with more severe forms respond to Rauwiloid alone.

A Better Tranquilizer, too

. . . because Rauwiloid's *nonsoporific* sedative action relieves anxiety in a long list of unrelated diseases not necessarily associated with hypertension . . . without masking of symptoms . . . without impairing intellectual or psychomotor efficiency.

Dosage: Simply two 2 mg. tablets at bedtime.
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Best first step when more potent drugs are needed

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Guest Editorial . . . .

Cross—Shield—Blue

An Interpretation

AFTER EXPERIENCING ONCE AGAIN the great joy of the Easter season with its re-focusing of our attention on the Cross and the empty tomb, I cannot forego the impulse to write the following thoughts in connection with the meaning of "Cross—Shield—Blue." I think, for example, of what can be done in the interest of establishing a better relationship between the physicians and our Blue Cross-Blue Shield Plan, and of how we, as physicians, must seek guidance from Above if we are to advise our patients, in a manner that will be fair and just to all, concerning hospitalization. Such, briefly, accounts for the crystallization of what is to follow.

The Cross must ever be central in our thinking. We neglect it and forget it at our peril. I am incapable of enumerating everything for which the Cross stands, but, certainly, when we look upon the Cross, we see at the very least a symbol of personal discipline—of self control, dedication, consecration—of vicarious and voluntary suffering—of salvation, devotion, and love at its highest and best—in short, of all that Dr. Harry Emerson Fosdick had in mind when he spoke of the "Unenforceable obligation". We know that while the Cross is personal and individual, it is also universal; we know, too, that it must be carried daily—*and voluntarily.* When we look upon the Cross, we realize immediately that someone has given of himself or herself—voluntarily—for the benefit of others.

The Shield, of course, was a vital part of that equipment carried by the knight in the day of chivalry designed to protect him physically. We, however, have come to think of the shield as an item of *spiritual* equipment. One's faith, for example, acts as a shield against the fiery darts of temptation, protects one spiritually. Surely, now, our Plan may be looked upon as an item of *financial* equipment, designed to protect and to assist in time of need or danger—that is to say, in time of illness.

Blue is a color generally symbolic of that which is "genuine", "faithful," "unwavering", "honest"—in a word, that which is *true* (the word used both in the sense of "truth" and in the sense of "loyalty"). One thinks, for example, of that very common expression "true-blue friend". More rarely, blue is considered a symbol of *wisdom,* and, because the color of the sky, indicative of that which is "from above" in origin and nature. Finally, in our use of "blue ribbon" to signify first place in a competition, we have attached to the color a meaning of *supreme excellence.*

Let me refer briefly to an old legend attached to St. Martin of Tours—a legend which is certainly of interest and perhaps also of use, particularly in connection with the symbol of the Cross. Martin, who lived in the fourth century, in his early years served in the Frankish army, and (so the story goes) was standing guard, one bitter

cold night, at the gate of Amiens. In the course of the night, he noticed beside the gate a beggar, entirely unclothed against the freezing wind. Now, Martin had only his blue military cloak and his sword; nevertheless, he took his sword and divided the cloak, giving one half to the beggar to clothe his nakedness—and was rewarded by a dream wherein he saw Christ displaying the triangular piece of blue cloth to angels with the statement, "This Martin gave *to me*". A century later, Clovis, the great Frankish king, after his conversion to Christianity, used as a battle flag a triangular piece of blue cloth, supposed to be the other half of Martin's cloak. It was expected to insure victory. Thus did the color—blue—come to be attached to the *act of mercy* and *the hope of victory*.

In olden days, names were considered to be significant and important; consequently, much thought was given to their selection. I do not know how Blue Cross-Blue Shield came to be selected as the name of our Plan. That the choice was an excellent one, all, I am sure, will readily agree.

But, are we not in honor bound to conduct ourselves in a manner that will reflect the truest, highest, and best meaning of "Cross—Shield—Blue"?

While we are specially trained, we must also remember that we are specially privileged. We cannot be satisfied with any type of service that is less than the best; we cannot, even though what we do may be considered good or better than once it was. It should not be necessary for us to be reminded that medicine is a sacred calling, and that, if we are to be assistants to and consultants with the Great Physician, truly manifesting His spirit, then our best efforts must be forthcoming in the care of the sick, primarily for the love of helping them rather than for any financial remuneration that may be ours. I would like to think that we are specially trained, some more so than others, not that we may make more money, but that we may render service that reaches always for *the best*.

Recently I heard a radio advertisement in which a company, speaking in behalf of its own pre-paid policy, depicted a child whose life depended upon a certain operation. The advertisement ended with the assurance that everything would be all right with this child because the child had a pre-paid policy with this particular company. The inference, of course, (whether intentional or unintentional I don't presume to say) was to the effect that the patient, had she not had this pre-paid policy, would have been denied the operation and would have died. I feel that this is an unfair reflection upon the great and honored profession of medicine, and I cannot believe that we have detoured so far from the highway traveled by those who have gone before us that anyone sick and in need of healing could be deprived of the proper service because of the lack of money.

It is felt by those who administer Blue Cross-Blue Shield that—in certain cases—the Plan is being abused and overused because of what is termed, *"Needless Hospitalizations"*.

At this point and in this connection, I wish to elaborate further on what Dr. Harry Emerson Fosdick has termed the *"Unenforceable Obligation"* and Dr. H. Richard Rasmussen's inspiring description of the Cross as a symbol of the "Unenforceable Obligation". The enforceable obligations, of course, are those imposed by custom and law, according to which we are permitted to do certain things and forbidden to do certain other things. There is, however, an area in our lives in which the only compelling obligations are those which voluntarily we impose upon ourselves. Now, it seems to me that it is precisely in this area of thought and action that our problem properly falls and in which its solution must eventually be found. It is just as incumbent upon the physician as it is upon the patient to classify each case as to hospital or home care in *the light of the principle of "unenforceable obligations"*. We are moral individuals and we must make moral choices. Moreover, the choice is not

always a simple choice between right and wrong, good and evil; often it is a highly complicated choice between what is best and what is merely good or second-best. After all, as compared with the best, even that which is good can be rated no higher than just this, *second-best.*

In this connection too, certain of Dr. Leslie Weatherhead's thoughts appeal to me, and may, I think, be helpful to us in thinking about our problem. Dr. Weatherhead points out that power must be considered always in relation to purpose, that, in fact, a good definition of power is, "the ability to accomplish purpose". Any action that defeats purpose is a sign of weakness rather than strength.

Now, we as physicians have the power to permit or to deny the hospitalization of patients—and therein lies our own peculiar dilemma. Admittedly, if every patient were hospitalized, we would ultimately price our Plan out of existence, thereby defeating its very purpose, namely, to provide protection—financially—to as many people as possible. At the same time, we want to be as certain as humanly we may to arrive at a decision just to the one that is sick. Finally, it is necessary, too, to remember that the holder of our Plan purchased it with the purpose of using it if and when he desires and thinks it necessary in case of illness. The dilemma is often acute; nevertheless, I do sincerely believe that in these borderline cases, if we will but take time to discuss the problem with our patients, keeping carefully in mind the principle of the "unenforceable objection", the decision will, in most instances, be fair and just to all concerned.

HAROLD W. MILLER, M.D.

Woodstock, Virginia

Let's Reminisce!

Alabama State Board of Health—The Legislature has just constituted the Medical Association of Alabama the State Board of Health. The session of the Association at Montgomery will be the first under the new law. The measure is looked upon as the commencements of better days in Alabama. We would be rejoiced to learn of the successful working of the plan adopted; but an efficient Secretary or Executive Officer cannot be constantly engaged without remuneration—at least, it would be unjust to expect it.

. . . . . .

We are ashamed to have to confess that the Virginia Senate, by a vote, taken March 19th, of 15 ayes to 18 noes refused to make the necessary appropriation to place the State Board of Health upon a working plan; although we predicted the result in our February issue, and this we did from an intimation as to the caliber of a large part of the Legislature. Men who talk of *repudiation,* as such, of just and incontrovertible debts, or of withholding a petty annual allowance to maintain the State University, or of taxing Church property for State purposes, and such things as these, are shallow-minded enough to be anything except politicians in the true sense of the term. Such men should not be returned to the General Assembly, nor ever honored hereafter with positions where legislation is involved. (Virginia Medical Monthly, April, 1875)

Aortic Stenosis

J. MORRISON HUTCHESON, Jr., M.D.
Richmond, Virginia

WITH THE REALIZATION that isolated aortic stenosis is more common than was formerly thought, and in view of possible surgical correction, renewed interest in this lesion has been manifested.

Though the exact etiology is still obscure and methods of treatment are far from satisfactory, it is nevertheless important that aortic stenosis be recognized in order that its significance may be appreciated and proper therapy applied.

Aortic stenosis is three times as frequent in men as in women and is seen more commonly in people past the age of fifty. Among acquired stenotic valve deformities, aortic stenosis is the second most common. It is a disease which has a greater incidence in climates where rheumatic fever and rheumatic heart disease are prevalent. The incidence of a past history of rheumatic fever varies greatly. In Mitchell's[1] recent study, the incidence of a past history of rheumatic fever in 131 cases of pure aortic stenosis was 15%. In patients with combined valvular disease, the incidence was progressively larger. In Bergeron's[2] recent analysis of 100 cases of pure aortic stenosis, studied at autopsy, 14% had a history of rheumatic fever.

In the past it was felt that acquired aortic stenosis in young people is rheumatic in origin and that calcific aortic stenosis in older people is "sclerotic".[3] More recent pathologic studies by Karsner[4] and others suggest that nearly all cases are initiated by inflammation due to rheumatic fever and that calcific or sclerotic changes develop later as a secondary process. Rarely, stenosis may be of congenital origin involving either the infundibular area of the valve or, more commonly, the valve itself. Most often the lesion develops slowly, and the primary physiologic derangement is a marked increase in resistance to emptying of the left ventricle. In the face of this obstruction, cardiac output can only be maintained by means of a more forceful contraction of the left ventricle resulting in higher intraventricular systolic pressure. Left ventricular work is increased and gradually hypertrophy of the left ventricle occurs. This results in an increased demand for coronary blood flow. Since coronary blood flow probably does not increase in proportion to this demand, there ensues a relative deficiency in the coronary circulation.

The symptoms of aortic stenosis are related to the output of the left ventricle and the efficiency of the coronary blood flow. Before these two functions are impaired, there are no symptoms. When coronary blood flow is inadequate for a given left ventricular work load, angina pectoris may appear. With progressive myocardial fibrosis the left ventricular reserve may decrease and syncopal attacks and pulmonary symptoms of left ventricular failure may appear.

In establishing a diagnosis of aortic stenosis, considerable confusion exists as to the reliability of the physical signs associated with this disease—namely, a basal systolic murmur, a systolic thrill, decreased or absent aortic second sound, a narrow pulse pressure, and the plateau pulse. No single sign is more than suggestive, but where a combination of signs can be elicited, the anatomical and functional state of the valve may be better assessed. Bergeron has concluded that with the presence of the three classic signs—murmur, thrill, and diminished aortic second sound—stenosis is generally of a considerable degree. In a recent study by Mitchell, it was found that the level of blood pressure was not helpful in the diagnosis of aortic stenosis or even in the estimation of the degree of constriction of the valve. It was also found that the so-called "plateau pulse" as detected by palpation was not very helpful. The direct brachial artery pulse tracing seems to be a much more reliable method of determining the peculiar characteristics of the pulse.

Proper radiological examination with fluoroscopy is essential as a diagnostic tool. The cardiac contour can be visualized, indicating cardiac chamber enlargement and particularly the concentric enlargement of the left ventricle. Frequently, calcium can be seen in the region of the aortic valve, but at times extensive calcium deposits in and about the mitral ring may be misinterpreted as involving the aortic valve. The position and mobility of calcium deposits can be judged with accuracy only by fluoroscopy.

HUTCHESON, J. MORRISON, JR., *formerly Research Fellow, Thorndike Memorial Laboratory, Boston City Hospital, and Department of Medicine, Harvard Medical School.*

Presented at the annual meeting of The Medical Society of Virginia, Roanoke, October 14-17, 1956.

The electrocardiogram may be helpful but is in no way diagnostic. Left ventricular hypertrophy or strain may be evident and abnormalities of rhythm may be discovered or confirmed. However, it must be remembered that the electrocardiogram may not show left ventricular hypertrophy even in the presence of significant aortic stenosis.

Using the phonocardiogram in the study of heart disease, the particular valve involved is determined from the relation of the murmur to the events of the cardiac cycle and from the point upon the chest wall where the sound is transmitted with the greatest intensity. The murmur of aortic stenosis, as recorded by phonocardiography, is typically a diamond shaped murmur appearing during ventricular systole, the stethoscope being in the second right interspace at the costo-chondral junction. The aortic second sound is diminished or absent. The murmur may be loudest along the left sternal border or even, occasionally, at the apex.

Certain aspects of aortic stenosis were recently reviewed by Bergeron and co-workers at the Thorndike Memorial Laboratory. Their studies were based on 100 autopsied cases of pure aortic stenosis.

In regard to symptoms, they found that dyspnea, peripheral edema, orthopnea, cough, and weakness predominated and that syncope was infrequent. Cardiac pain was present in approximately one-third of the patients. One of the most difficult problems confronting the physician is to distinguish between anginal pain due to arteriosclerosis of the coronary vessels and anginal pain without sclerosis of the coronary vessels but due to a diminished coronary blood flow secondary to narrowing of the aortic valve area. Both conditions may at times exist.

Interesting data were recorded in the same study regarding the survival times of these patients after the onset of individual clinical manifestations. Within two years of the advent of any one of these four manifestations—cardiac pain, syncope, congestive heart failure, or auricular fibrillation—one-half of the patients had died. Less than one-quarter of the patients survived the onset of these manifestations by five years. With the co-existence of any two of the same manifestations, life expectancy was appreciably decreased.

Much information has been gained from the study and analysis of direct brachial artery tracings. The contour and duration of the arterial pulse curve is said to be characteristic in aortic stenosis. Some people place great emphasis upon the form of the pulse tracing and abnormalities found in it in patients with aortic stenosis.

A normal arterial pulse curve, using an indwelling arterial needle in the brachial artery, consists of an abrupt, almost vertical upstroke, the anacrotic limb, and a more gradually sloping downstroke, the catacrotic limb. Under ordinary circumstances, the anacrotic limb is smooth and uninterrupted. The descending limb, on the other hand, shows a negative wave or depression followed by a positive wave. With a slow rate of ventricular ejection, such as occurs in narrowing of the aortic ring with stenosis, the upstroke is gradual, the wave usually of low amplitude, and a secondary fluctuation may appear —the anacrotic notch.

Figure I shows six brachial arterial tracings from patients with aortic stenosis. The top three are taken

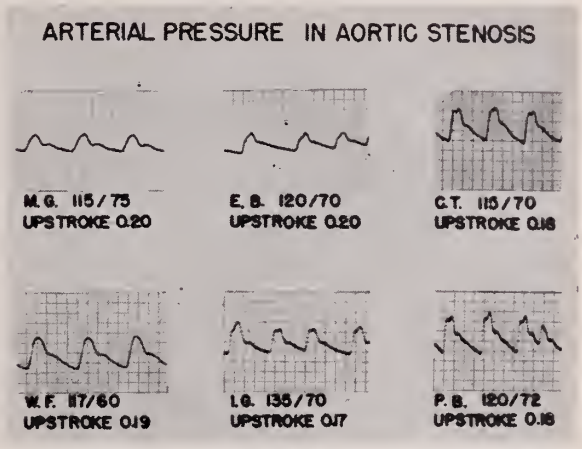


Fig. 1

from patients with proven severe aortic stenosis and the bottom three from patients with mild aortic stenosis. One can see a prolonged systolic upstroke and at times an anacrotic notch. This figure illustrates that, while a characteristically tracing may be obtained in patients with aortic stenosis, this test is not of value in differentiating severe from mild stenosis.

Hancock and Abelmann[5] have recently made a study of brachial artery pressure tracings in 250 patients to determine the clinical usefulness of the procedure, especially in the evaluation of aortic stenosis. Their conclusions were that, because of the many factors which determine the peripheral pressure pulse, the interpretation of such tracings is difficult. With reference to aortic stenosis, however, a clinical diagnosis of this condition may be confirmed by the appropriate pulse contour, but the severity of the lesion cannot be determined in this manner. A patient with severe aortic stenosis only

very rarely will show a normal brachial arterial tracing.

Certain essential physiological data may be obtained by measuring the pressure gradient across the stenotic aortic valve. This direct assessment of the hemodynamic impairment yields information about the severity of stenosis and aids in selecting the more suitable candidates for aortic valve surgery. The basic technique is to insert catheters, one into the proximal aorta (or use the brachial artery pulse curves as described) and one in the left ventricle. With suitable pressure recording devices, graphic representation of the pressures may be obtained. Figure II illustrates such physiological data obtained in the operating room through a thoracotomy incision. With a needle in the left ventricular cavity and one in the proximal aorta, simultaneous pressure tracings are obtained on both sides of the aortic valve, and in this case a sizeable systolic pressure gradient of 125 mm. of mercury is apparent.

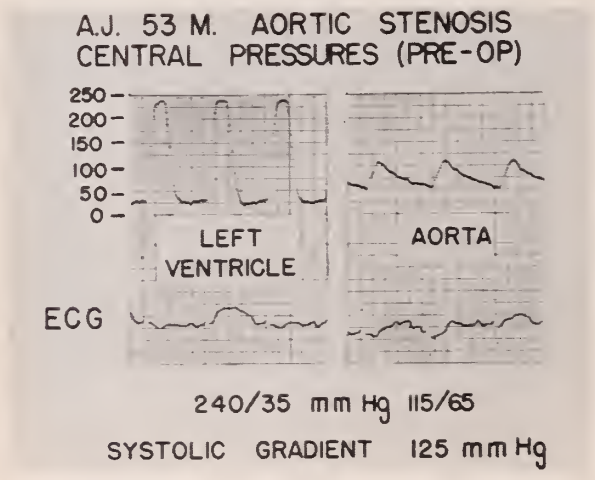


Fig. 2

In Figure III the same procedure is used and a simultaneous brachial artery tracing is also depicted. Here, the systolic pressure gradient is 102 mm. of mercury and the brachial artery tracing shows a prolonged systolic upstroke with a characteristic anacrotic notch.

Measurement of pressure gradients at operation has the disadvantage that unnecessary thoracotomy is not prevented thereby, but has the advantage in cases of mitral stenosis and questionable aortic stenosis of permitting a valid decision at time of operation whether the aortic valve should also be explored. The method described in obtaining intraventricular pressures is not necessarily the best method available. The bronchoscopic approach is used, and the transdorsal method of left heart catheterization has proven quite successful. It is much easier to measure blood flow (cardiac output) with left heart catheterization than it is to do so in the operating room. The importance of measurements of blood flow is increasingly evident since the pressure gradient is a function of the flow, and if the flow is depressed during operation, a small gradient may be seen with severe aortic stenosis.

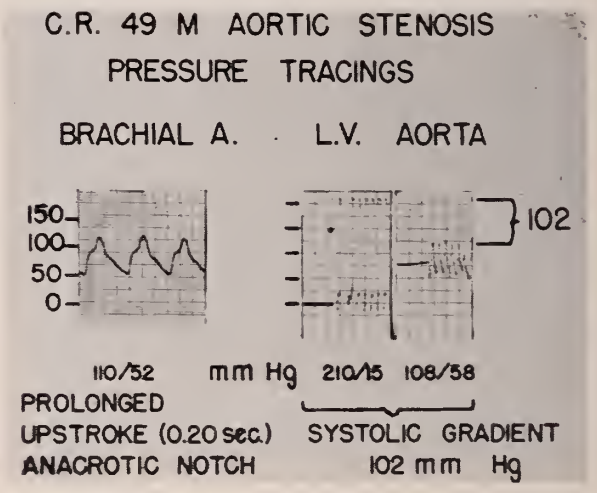


Fig. 3

The medical management of aortic stenosis consists largely in treatment of heart failure and angina. These patients generally respond rather poorly to medical treatment when compared to people with other valve defects and other types of heart disease.

Since the pioneer work of Tuffier[6] and Smithy[7] dealing with the surgical correction of aortic stenosis, considerable interest has developed in such a method of treatment. Bailey[8], Harken[9], Muller[10], and others have shown that, in certain selected patients, aortic commissurotomy seems to have a place in the treatment of this condition. At present it is believed that the candidate for surgery should be one with pure severe aortic stenosis under the age of 60, in whom symptoms have developed and are progressive, particularly left ventricular failure. No published series has been studied long enough in terms of postoperative follow-up to draw any definite conclusions as to the real merits of such a formidable procedure. The operative mortality is still high and complications serious.

SUMMARY

Certain aspects of the natural history of aortic stenosis have been reviewed.

Studies of the physical findings indicate that a composite of physical signs is quite helpful in establishing a diagnosis, but reliance upon single physical signs for such a purpose is frequently misleading.

With help of the x-ray, electrocardiogram, and phonocardiogram, the diagnosis may be confirmed.

It has been shown that the life expectancy of these people is poor, once they have become symptomatic.

A more thorough analysis of basic physiologic data is extremely important in patients who are seriously considered as candidates for aortic valve surgery—i.e., information derived from the brachial artery pulse tracing, intraventricular pressure recordings, pressure gradients across the aortic valve, and blood flow determinations by means of left heart catheterization.

Discussion by Dr. Julian R. Beckwith, Charlottesville

This is an excellent review of the pathology, pathologic physiology, physical signs, and clinical course of aortic stenosis, a very timely subject and one in which we have been much interested.

The physical signs, as has been pointed out, do not usually follow the so-called classical pattern. One may find the systolic murmur to be loudest at the apex rather than over the aortic area. There is no characteristic blood pressure or pulse and, frequently, there is a fairly loud aortic second sound. It should be mentioned also that when severe heart failure supervenes, the murmur may disappear and the cause of the failure be overlooked. The hemodynamic significance of the stenosis may be very difficult to determine and occasionally requires the use of our entire diagnostic armamentarium before this is established. This is particularly true if other valvular lesions are also present.

Sometimes, as Dr. Hutcheson mentioned, the gradient across the valve must be measured at thoracotomy before one is sure that the obstruction needs relief. We have recently had such a patient with mitral stenosis and a loud systolic murmur at the aortic area thought to be due to aortic stenosis. At operation, a very small pressure gradient was found across the aortic valve and mitral valvuloplasty was the only necessary operation.

The big problem to decide when one has made a diagnosis of significant aortic obstruction is whether or not to advise surgery. At the present time, aortic valvulotomy is done relatively blindly and not very precisely. This is no reflection on the surgeons who do the operation but is true because of the conditions under which it must be performed; that is, in the face of a high pressure and occasionally actively contracting heart muscle. The mortality is relatively high and the results not nearly so good as in mitral valve surgery. Occasionally one merely substitutes aortic regurgitation for aortic stenosis. We have, however, seen a few excellent results and have read reports of others. This is a real tribute to the surgeons who at present are doing this under very difficult circumstances.

It is my very strong feeling that at present the operation should be reserved for patients who have progressive symptoms. These patients, as Dr. Hutcheson has pointed out, go downhill rapidly and more than 50% are dead in two years. One can conscientiously recommend a risky operation in these patients who are not doing well and who may be greatly improved by the operation.

Those without progressive symptoms should, in my opinion, not have surgery now since it is very probable that in the near future the aortic valve can be fractured and reconstructed under direct vision with the chance of a much better result and with less risk. We are following a number of these patients now and will recommend such surgery later.

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Hodgkin's Disease With Unusual Findings On Sternal Marrow Study

Report of a Case

JAMES B. TWYMAN, M.D.
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SINCE HODGKIN'S DISEASE is of unknown etiology, therapy may at times be a trying ordeal for both the patient and the physician. Any additional procedure which may be of help should be utilized. In the case being reported, sternal marrow aspiration and a study of the cellular elements seemed to furnish a key to therapy.

REPORT OF A CASE

The patient was a 31 year old married, white, plasterer, who was first seen on the 19th of July, 1954, with the complaints of soreness throughout his lower abdomen, sweats, and fever of seven weeks duration. He had also had anorexia and a twelve pound weight loss. Two weeks previously, Achromycin (tetracyline) one gram per day, had been prescribed for seven days without benefit. The patient had noted no recent lymph node enlargement.

On the 11th of November, 1952, three nodes of moderate size had been removed, and eight days later, a radical dissection of the neck had been performed. Pathological section and study of the material from both procedures had revealed malignant lymphoma, Hodgkin's granuloma (Fig. 1). The patient's post operative course had been uneventful. For thirteen months he had had no recurrence. In late December, 1953, there had been gradual and progressive enlargement of the right anterior cervical lymph nodes during a six week period. At that time the patient had had neither systemic symptoms, nor enlargement of the liver or spleen. Early in January, 1954, two lymph nodes in the left supra-

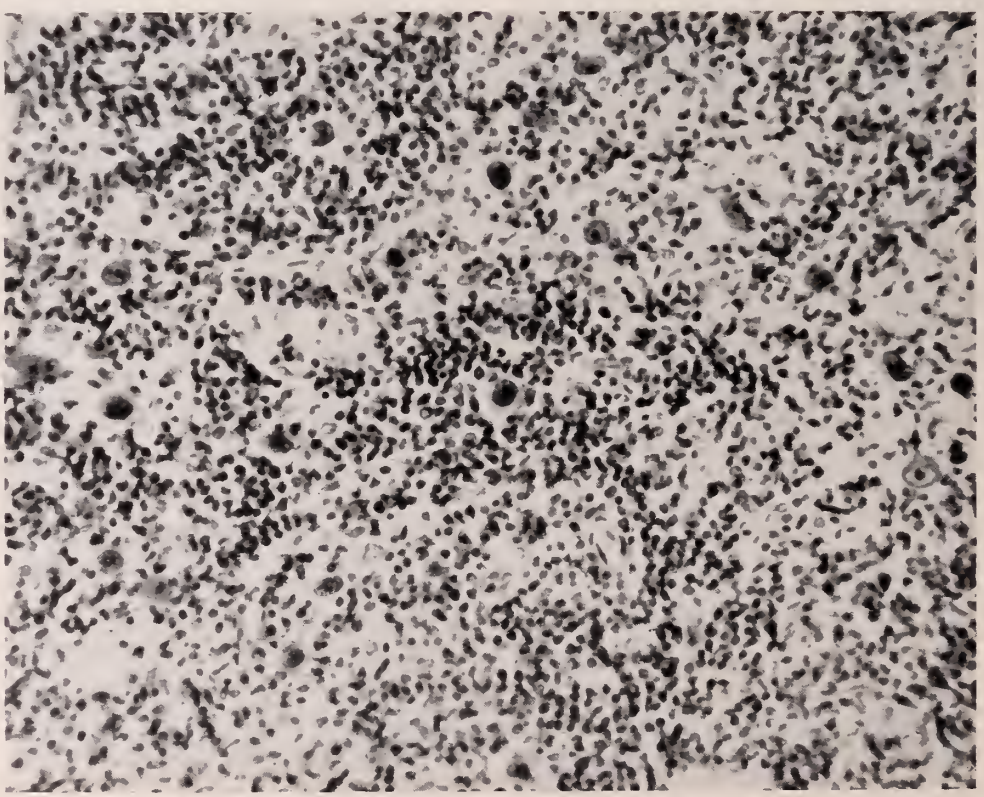


Fig. 1--Section of a cervical lymph node x 200 showing replacement of the normal lymphoid tissue by Hodgkin's granuloma. The large Reed-Sternberg cells are easily identified.

clavicular area and one in the right mid-neck became palpable and gradually increased in size. Over a four week period, 1450 r were delivered to the neck area on the right and left through four portals. The adenopathy subsided and the patient seemed to be well for five months.

Familial, past, systems, and marital history were not remarkable.

Physical examination on the 19th of July, 1954, revealed a chronically ill and undernourished young male. The skin and mucous membranes were pale. There was a large, healed, six by four inch, crossed incision on the right neck. There were a few shotty axillary and inguinal nodes felt bilaterally. The liver and spleen were both palpable, two finger breadths below the costal margin. A small right inguinal hernia was present. The temperature was 102 degrees F., pulse was 92 per minute, and the blood pressure was 100/68 mm. of Hg. His weight was 123 pounds. The remainder of the physical examination was within normal limits.

Urine examination at this time showed a specific gravity of 1.016, negative tests for albumin and sugar, and no abnormalities on microscopic examination. The sedimentation rate (Westergren) was 125 mm. for one hour with an hematocrit of 33%, and a hemoglobin of 9.5 gm.%. Red blood cells were 3.8 million and white blood cells were 4,200 per cubic millimeter. The differential count revealed 70% polymorphonuclears of which 40% were band forms and metamyelocytes, 20% large and 10% small lymphocytes. Platelets and erythrocytes were normal.

Roentgen therapy was given over three portals of the abdomen, which included the left upper and both lower quadrants, and also, over the corresponding portals in the back. During approximately three weeks, he received 1325 r and was transfused with 1000 c.c. of whole blood. None of these measures benefited the patient and his course continued downhill.

On the 16th of August, 1954, approximately eleven weeks after the onset of his symptoms, he was hospitalized. Physical examination at that time revealed no essential change. The admission blood studies showed a fairly profound anemia with 2.8 million red blood cells per cubic millimeter and a hemoglobin of 7.5 gms.%. The leukopenia persisted. Sternal marrow aspiration was done under local anaesthesia. The marrow was hyperplastic with respect to both the normoblastic and myelocytic elements. The striking large cells with bizarre nuclei, containing nucleoli and heavy clumps of chromatin, are presented in the photomicrograph (Figs. 2A and 2 B).

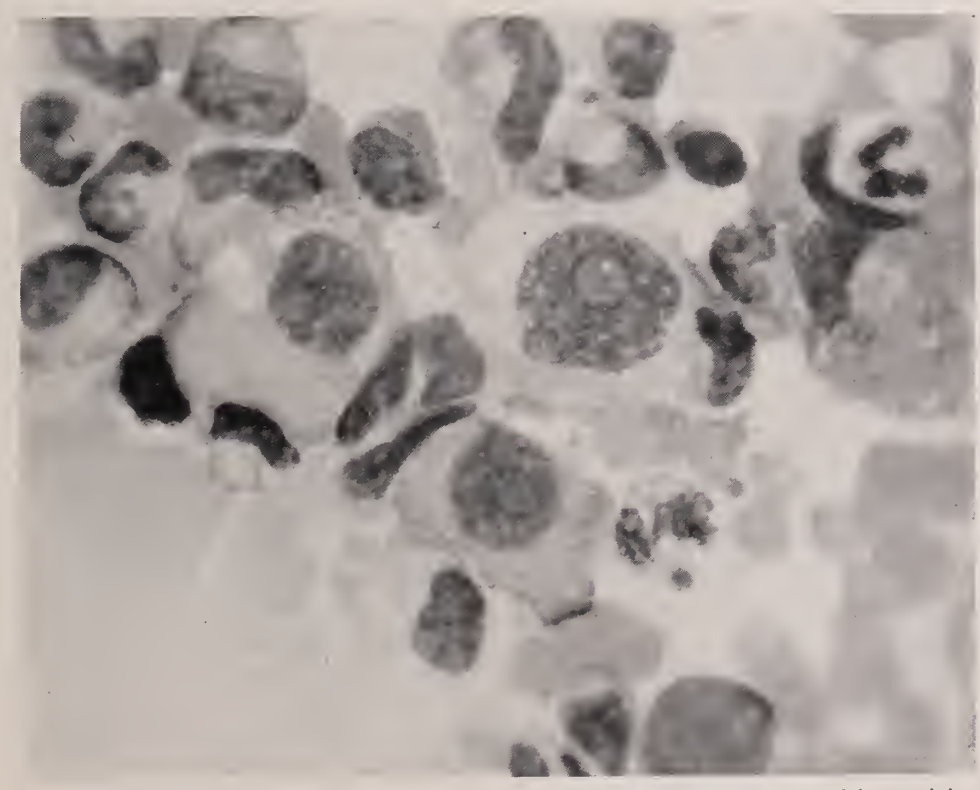


Fig. 2A—Sternal marrow smear x 1100 shows the large cells with bizarre nuclei containing nucleoli and heavy clumps of chromatin. Leukocytes adjacent to these cells furnish a good comparison of size.

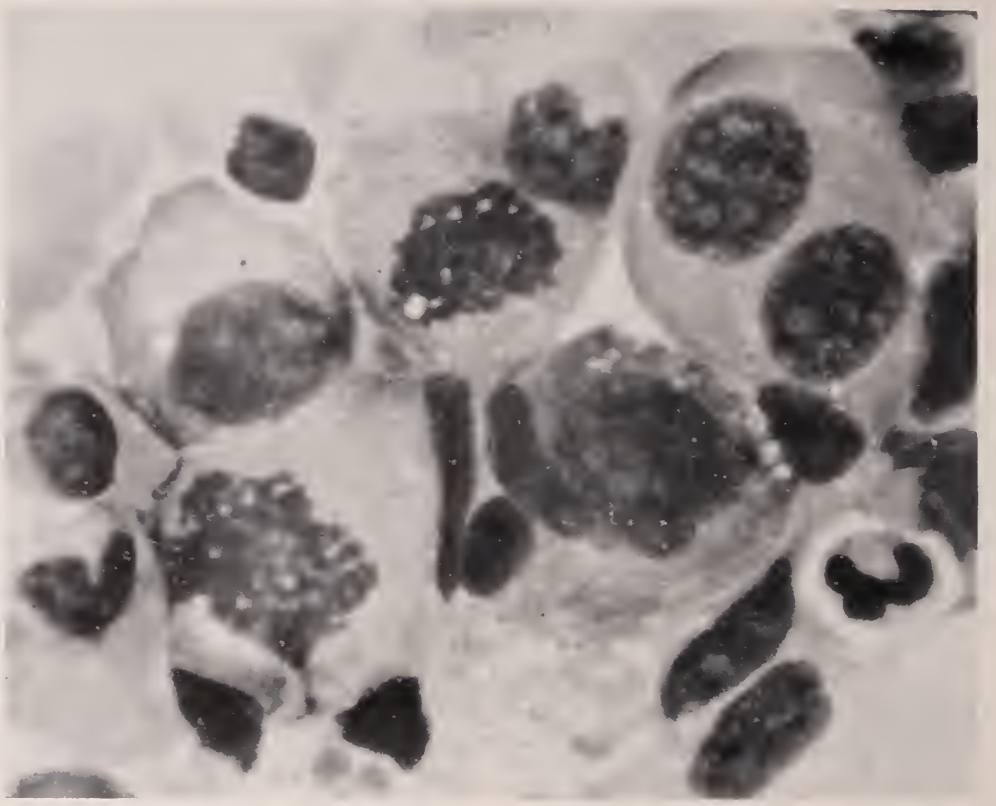


Fig. 2B—Photomicrograph x 1400 of sternal marrow showing cells similar to those in Fig. 2A, but nuclei are multilobulated. The cell in right upper portion contains two nuclei. In each, several nucleoli are visible.

By the 30th of August, the patient's weight had dropped to 104 pounds, and his condition was deteriorating daily. On the first of September, he was given intravenously 4.7 mg. of nitrogen mustard (Mechlorethamine Hydrochloride). This same dose was repeated on three subsequent occasions, making a total of 18.8 mg. Penicillin, 1 c. c. containing 600,000 units of G Procaine and 200,000 units of Potassium G Penicillin, was administered intramuscularly, every other day from the 2nd through the 9th of September. On the 9th and 10th of September, respectively, he was transfused with 500 c.c. of whole blood. The patient's improvement was nothing short of miraculous. The effect of treatment on his temperature and leukocyte count is shown in figure 3. His fever and sweats subsided. His appetite returned, and his nausea and vomiting disappeared. Within about five weeks, he had gained almost twenty pounds and was able to return to work as a plasterer.

During the following year he had three relapses, occurring at three to four month intervals. On two occasions, Roentgen therapy, totalling 2,277 r, to the splenic area was tried without benefit. Nitrogen mustard, in each of these relapses, was administered with the same gratifying results. During November and December, 1955, his condition again deteriorated. Three courses of mustard therapy had only transient effect with remissions lasting five to ten days.

The patient's final hospital admission was on the 10th of January, 1956, because of sudden onset of sharp pain in the left upper abdomen and anterior chest. He had had a recent non-productive cough. Fever, anorexia, weight loss, and weakness were his other symptoms.

Physical examination revealed an emaciated, mildly icteric male with multiple small petechiae scattered over the mucous membrane of the pharynx, on the torso and extremities. He was short of breath with marked splinting of the chest, particularly on the left. Many course rales were present throughout both lung fields without impairment of resonance or change in breath sounds. There was marked tenderness over the spleen which was felt four finger breadths below the costal margin. A rub was heard over the splenic area. The liver could not be felt and there was no adenopathy. The temperature was 102 degrees F., the blood pressure was 90/60 mm. of Hg, pulse 120 and the respirations 22 per minute.

Laboratory data: The urine showed a trace of

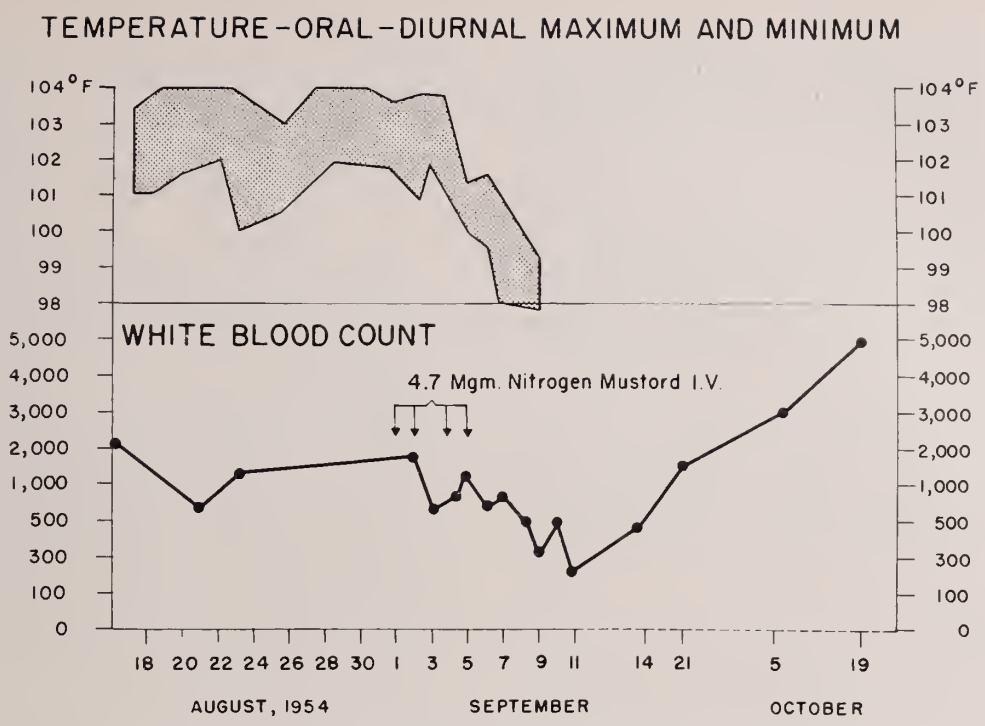


Fig. 3—This chart shows the effect of the initial course of nitrogen mustard on the fever and white blood count.

sugar, a plus 1 albumin, but no abnormalities on microscopic examination. The hemoglobin was 6 gms.% with an hematocrit of 21%. The red blood count was 2.01 million and the leukocytes were 160 mm. per cubic millimeter with 56% neutrophiles and 44% lymphocytes.

Penicillin and streptomycin were administered intramuscularly. Prednisone, 20 mg. in the first twenty four hours and 10 mg. as a daily dose, was begun. Triethylene Melamine (TEM), 5 mg., was given orally on the second hospital day. Despite supportive treatment with oxygen, opiates, digitalization, and a small blood transfusion, he died with pulmonary edema and shock on the third hospital day.

Autopsy revealed Hodgkin's granuloma involving the liver, spleen, kidneys, and lymph nodes in the neck, mediastinal, retroaortic and peripancreatic areas; also, the bone marrow of the ribs and vertebra was invaded. There was pulmonary edema and confluent lobular pneumonia in the middle and right upper lobes. Microscopically, the post mortem sections were quite similar to those obtained from the nodes in the neck in November, 1952. Both revealed the characteristics typical of Hodgkin's granuloma (Fig. 1).

DISCUSSION

At the time of this patient's initial visit, the peripheral blood smear suggested that hemopoietic activity was probably adequate. Examination of the bone marrow contributed two pertinent facts, namely: (1) there was an abundance of normal marrow elements both erythroid and myeloid; (2) there was evidence of disseminated Hodgkin's disease. The patient's critical condition, with progressive deterioration, warranted the calculated risk of nitrogen mustard therapy. Despite the fact that the marrow was hit and hit heavily, by the action of Mechlorethamine Hydrochloride, the early remissions, lasting three to four months, justified the decision on the type of treatment given. If the large bizarre cells readily seen on all four smears of the patient's sternal marrow were Reed-Sternberg cells, then the aspiration studies were not only of prognostic and diagnostic value, but also, of therapeutic importance.

Having raised the question of Reed-Sternberg cells in the bone marrow of patients with Hodgkin's disease, but without proven osseous metastases, consider the evidence at hand. Invasion of the bone marrow is seen on post-mortem examination in about 60% of the cases, but ante-mortem demonstration of the Reed-Sternberg cells in marrow smears is rare[1,2,3,4,5,6,7]. However, Varadi recently reported obtaining these characteristics cells in four of six cases[8]. Some authorities feel that identification of these characteristic cells in ante mortem marrow is

not only difficult, but also, open to question because of the similarity to the megakaryocytes[2,4,7]. In the case under consideration, three competent hematologists reviewed the sternal marrow smears. Their observations were made independently and without direct knowledge of the case. Their unanimous opinion was: "The cells seen appear to be malignant." Since necropsy failed to reveal any invasion of the vital organs except by Hodgkin's disease, the evidence at hand supports the fact that Reed-Sternberg cells were obtained by bone marrow aspiration.

SUMMARY AND CONCLUSION

A case of Hodgkin's disease has been presented. The sternal marrow studies were of therapeutic and possibly of prognostic help. Reed-Sternberg cells were thought to have been present in the ante-mortem smears.

Acknowledgements. My thanks are due to Dr. Hsu Yin-Tang for his help with the tissue sections, to Dr. W. E. Bray, Sr., and Dr. O. B. Bobbitt for their suggestions with the marrow smears, and to Dr. H. L. Archer for the clinical data of the patient's illness prior to July, 1954.

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Helps Find Lung Cancer

The laboratory examination of sputum frequently can give an early indication of lung cancer, according to two Albany, N. Y., doctors. While the test cannot always establish a definite diagnosis, it can indicate the need for further study with other more specialized techniques, Drs. Doris S. Rome and Kenneth B. Olson of Albany Medical College said in the May 11 Journal of the American Medical Association.

They pointed out that cough and expectoration are common in adults as a result of chronic irritation due to smoking, chronic bronchitis, or acute pulmonary infection. Such persons should have their sputum examined for cancer cells in an effort to make an earlier diagnosis of lung cancer—if it is present—and thereby begin treatment sooner.

The doctors examined 3,102 specimens of sputum and bronchial aspirates (material drawn from the lungs themselves) from 1,203 patients in order to detect possible cancer cells. Of these patients, 266 were ultimately believed to have lung cancer. Almost three-fourths of the 266 patients had suspicious or positive results on first examination of sputum or bronchial aspirates.

It was possible to establish diagnosis somewhat more accurately with the easily obtained sputum specimens than with bronchial aspirates.

Treatment of Viral Syndromes with a Lipo-Protein-Nucleic Acid Compound (Reticulose)

A Report of Five Cases

ROBERT H. ANDERSON, M.D.
RALPH M. THOMPSON, M.D.
Alexandria, Virginia

IN RECENT YEARS there has been considerable stabilization of ideas concerning viral and rickettsial infections and great strides have been made in delineating the various syndromes, pathology and diagnoses of the diseases, which have greatly reduced the gaps in our knowledge. Extensive laboratory investigations have clarified considerably the chemical and physical fractionations and their characterizations as well as the serologic reactions and propagation, but much remains to be learned about the causative agents of these diseases. In attempting to solve clinical problems in viral and rickettsial diseases there is need for effective therapy and this need has stimulated a search for newer compounds.

We are familiar with the excellent results obtained in the therapy of certain bacterial and protozoal infections by the use of chemical agents and antibiotics and the failure of similar therapy in the treatment of viral and rickettsial diseases. Some evidence has been obtained to warrant the hope that eventually various agents will be found effective against the maladies of the latter group.

It has been demonstrated that sulfonamides and penicillin have been somewhat efficacious against the action of certain viruses of the psittacosis, lymphogranuloma and trachoma group. We are also familiar with the beneficial role of chloramphenicol and chlortetracycline in the treatment of psittacosis and the rickettsial diseases.

The reason for the lack of therapeutic response in this group is probably due to the fact that viruses and rickettsiae differ greatly from bacteria and protozoa in both their nature and metabolic activities[1].

At the present time, indiscriminate use of known chemotherapeutic agents and antibiotics in the treatment of all viral diseases is without merit and should be discouraged.

Since it is believed that known therapeutic agents have no direct deleterious effect on viruses, the logical approach is to find potent agents that will interfere with their activity and inhibit multiplication by disturbing enzyme systems and metabolic processes of their host cells.

It is fairly well established that viruses and rickettsiae are definite parasites and in order for them to propagate they must have contact with living cells of a host or contact with living cells in tissue cultures on which they can parasitize. Presumably all viruses are pathogens and there are no saprophytic viruses known at present. They can adapt themselves to host species other than those with which we are familiar. We are also aware that viral types and variants often have differences of antigenicity.

It has been noted that the therapeutic agents with which we are familiar do not inactivate or injure viruses and rickettsiae. Their action is one of arresting multiplication of the pathogens. The fact that they are intracellular parasites without complete enzyme systems or metabolic processes may explain the difference between the response of bacterial and protozoal diseases and viral and rickettsial diseases.

There has been an excellent therapeutic response to the drug known as "Reticulose" in pathogenic processes which has been most encouraging as attested by numerous reports from physicians throughout the United States.

For many years we have been aware of the role that protein and nucleic acid compounds have had in combating infection by stimulating leukocyte responses, increasing phagocytic phenomena, and accelerating antibody formation[2,3,4,5].

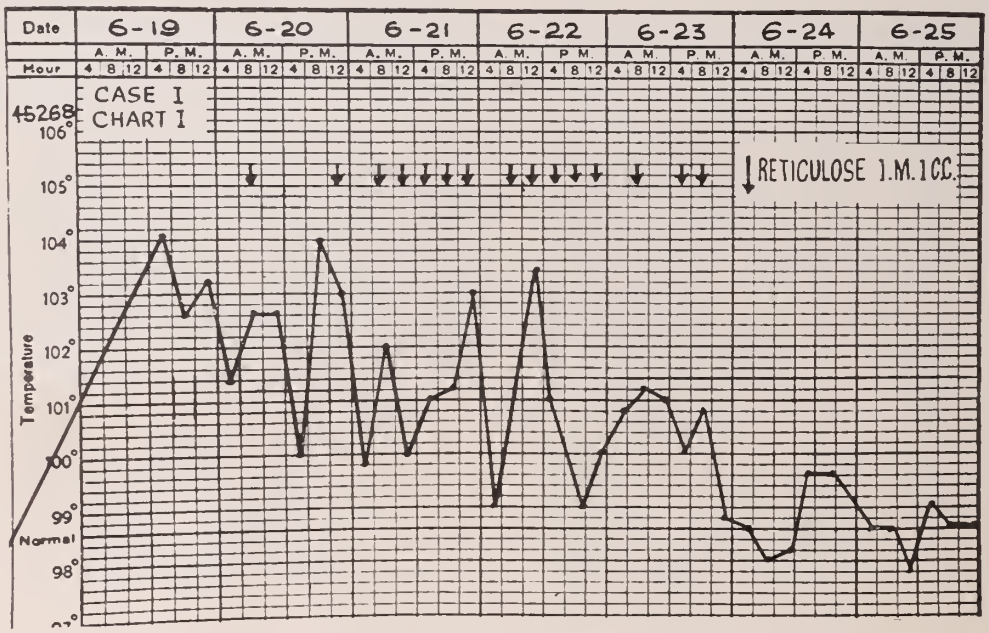
The excellent antigenic properties of Reticulose and its ability to enhance and accelerate the leukocytic response has been shown by Berry and Mitchell in 1951[6]. They reported that their experimental animals were more resistant to infection after receiving this substance, and they supported previous claims that this material stimulated leukocytic production. These findings were later substantiated

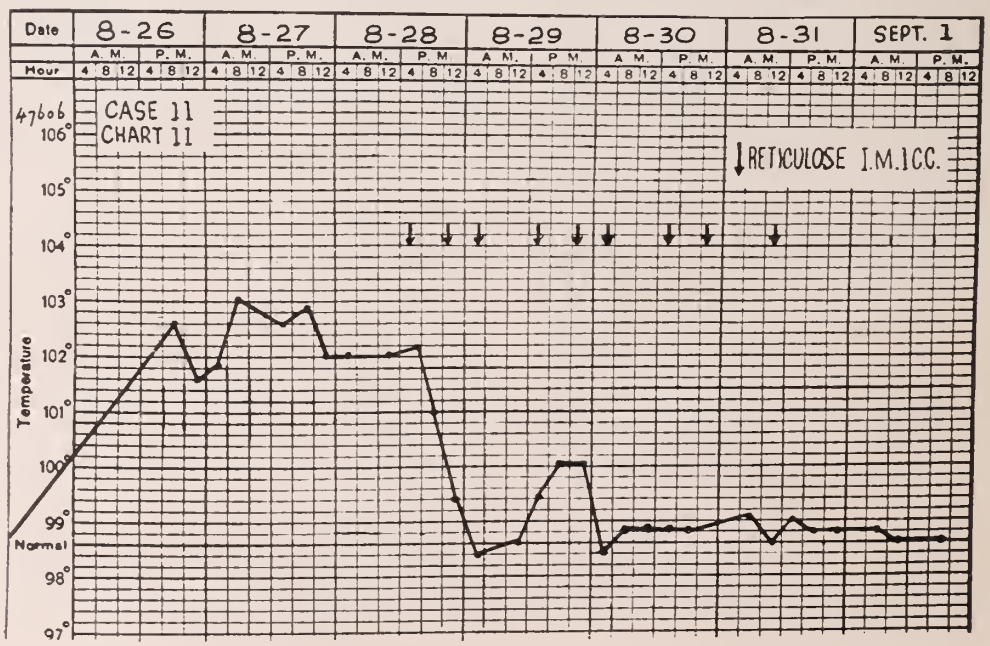
"Reticulose", prepared and furnished by Chemico Laboratories, Inc., Miami, Florida.

by Thompson in 1952[7] in studies on the treatment of the post-irradiation syndrome.

For the past eighteen months, at a leading University, a large and impressive research project in primate experiments has been under way. They have demonstrated the anti-viral abilities of Reticulose and its faculty for developing specific antigens and antibodies against a series of both viral and bacterial invaders. They have been doing impressive experiments on monkeys artificially injected with poliomyelitis viral strains and treated with Reticulose. Also, in their experiments, they have obtained a similar therapeutic response in the treatment of animals infected with influenza viruses. It is their belief that Reticulose affects and alters the living cells of the host, thereby inhibiting further multiplication of the pathogenic process. Since this agent has such a rapid therapeutic response, they have concluded that this drug exhibits positive viral antigenic properties that accelerate antibody formation and, as a result of the leukocytic response, greatly increases phagacytosis.

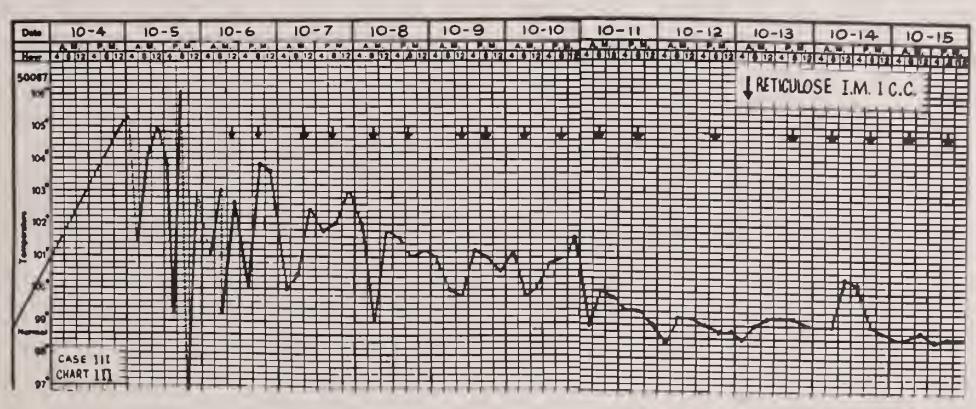
Reticulose is the combination product of a protein complex associated with nucleic acid and a lipoidal substance. The extent of the chemical union is not completely understood, although electrophoretic

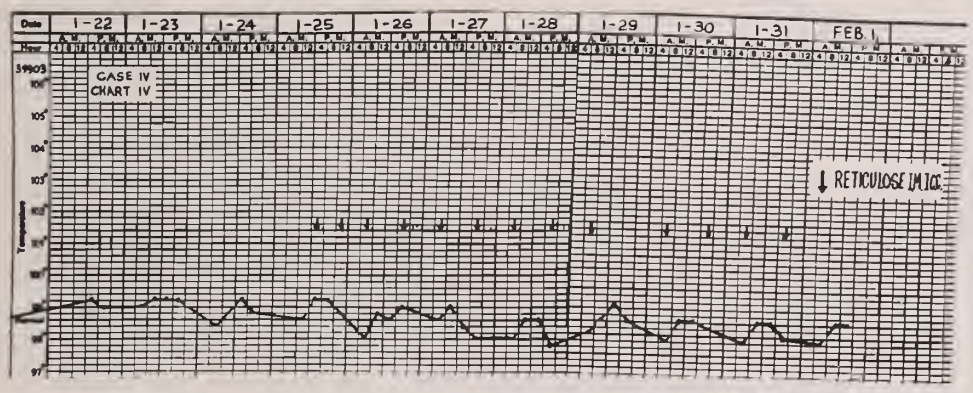


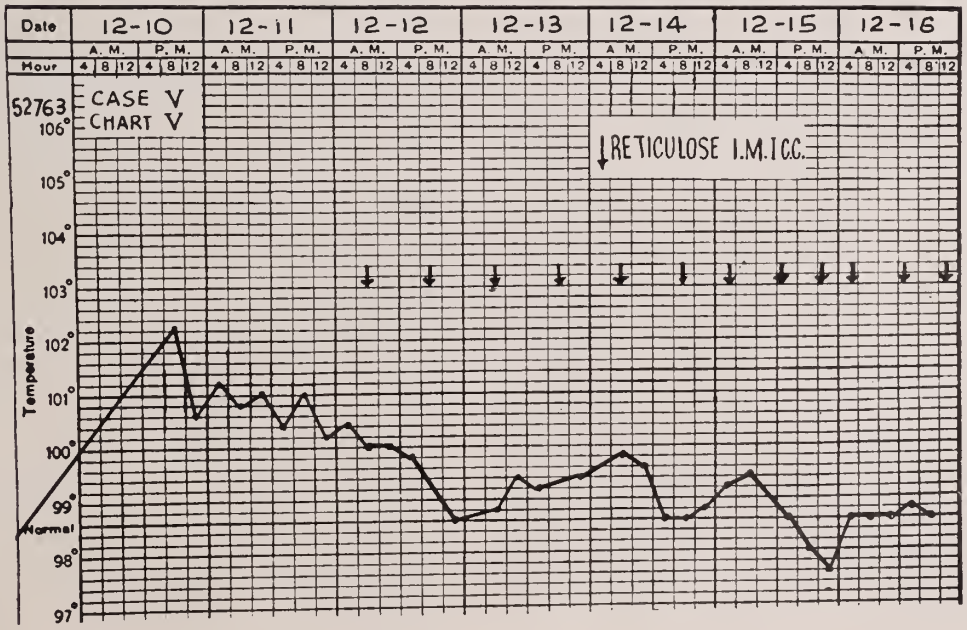


studies seem to reveal two peaks which may indicate two different chemical structures. Since this is a true solution, it may be justifiable to assume that the two products are entirely miscible or soluble within themselves. Experiments in spray drying Reticulose seem to reveal certain physical qualities which may also suggest that the components of Reticulose have undergone union in the formation of a new chemical substance. The solubility factors of the various components of Reticulose in distilled water are quite negligible, and in some cases they are entirely insoluble. The preparation of a dried material from Reticulose produces a product that is instantly soluble in distilled water.

The protein used in the manufacture of Reticulose can be obtained from several sources. The process







has been adjusted to use normal horse serum because it is uniform and easily available. The fact that a foreign protein when injected in the human could cause various degrees of sensitization and anaphylactic reaction made it apparent that the removal of the sensitizing properties of this protein was necessary. An exclusive process was developed to achieve this objective. This desensitized protein is then processed in the presence of lecithol, of animal origin, thereby obtaining the lipoidal fraction and association with nucleic acid. The resultant material is then standardized by chemical assay. The product is then adjusted at a pH of 7.5 and packaged.

Reticulose is non-toxic, is extremely stable for indefinite periods of time under ordinary room temperatures, and is free of any anaphylactic or sensitization properties.

The suggested dosage of Reticulose in an acute infection is one ampoule (2 c.c.) injected intramuscularly every four hours. This may be gradually decreased with clinical improvement. In infants and young children the dosage is 1 c.c. every four hours. The dosage may be altered as determined by the severity of the infection and the clinical response.

The following report of five clinical cases of acute viral syndromes in which Reticulose was used is herewith presented.

CASE I. #45268—This seven year old white male was admitted to the Alexandria Hospital on 6/19/56, with a history of headache and a slight fever for three days prior to admission. On 6/18/56, he vomited three times and seemed to have a stiff back. That night he was seen by his physician who found a unilateral parotid swelling. On 6/19/56, he was found to have a bilateral parotid swelling and marked rigidity of his neck and back. He was admitted for further study.

Family History—Non contributory.

Past History—He had had no significant diseases or injuries.

Physical Examination—On admission the patient was found to be a well developed, well nourished, white boy who appeared acutely ill, but in no distress. His temperature was 103.4 (R). EENT examination was normal, except for bilateral parotid swelling. The chest was clear to percussion and auscultation. His heart showed no murmurs, enlargement or arrhythmia. There was generalized tenderness of the abdomen but liver, spleen and kidneys were not enlarged. The genitalia were normal. All reflexes were normal and equal. There was marked stiffness of his back and neck with a positive Kernig's sign.

Laboratory—Studies revealed a hemoglobin of 13.4 grams per 100/ml. and a white blood cell count of 5,200 per cmm. with 44% neutrophils, 55% lymphocytes and 1% eosinophiles. There were 42% segmented forms and 2% bands. Urine was negative for albumin and sugar. Microscopic examination showed 5-6 white blood cells per high powered field. Spinal fluid obtained on 6/20/56 was colorless and cloudy. The total cell count was 245 per cubic mm. with 20% polymorphonuclear leukocytes. There were 80% lymphocytes. Total spinal fluid protein was 42 mg.%. The bacteriologic cultures were negative after seventy-two hours of incubation.

Clinical Course—The initial diagnosis was mumps encephalitis. The patient was given 500 c.c. of 5% glucose in Ringer's solution intravenously, shortly after admission. He was given five grains of aspirin every four hours and elixir of phenobarbital, drams II, every four hours when awake. His fever continued to range from 100-104 degrees. On 6/20/56, Reticulose was started. He was given 1 c.c. intramuscularly every four hours except for the 2 A.M. dose. After the initial dose of Reticulose, the fever rapidly dropped to normal but elevated slightly the next day before dropping a final time and remaining within normal limits. On 6/21/56, the patient showed definite improvement in the stiffness of his neck and back. There was less swelling and tenderness of his parotid glands. On 6/26/56, stiffness of his neck and back was negligible and the parotids were no longer enlarged or tender. He was discharged in good condition on the seventh hospital day. Final diagnosis was mumps encephalitis.

CASE II. #47606—This four month old white male was admitted to Alexandria Hospital on 8/26/56, with a history of the onset of fever four days before admission. He was seen by his physician that evening when physical examination was found to be completely negative except for the presence of acute follicular tonsillitis. Two of his siblings also had sore throats. He was put on aureomycin, dram I q. 6 hr., but the fever continued so the medication was changed to achromycin on 8/24/56. The fever continued, bulging of the anterior fontanel developed and he was admitted to Alexandria Hospital.

Family History—Non contributory.

Past History—This infant was premature at birth but had otherwise done well and had not been ill previously.

Physical Examination—On admission, the patient was found to be a well developed, well nourished

white male infant who was moderately alert. Temperature was 102.4 degrees. EENT were normal except for slight injection of anterior faucial pillars. Chest was clear to P. and A. Heart showed no murmur or enlargement, rate was rapid. Abdomen was normal as were the genitalia. Neurological examination showed definite bulging of the anterior fontanel. There was a slight nuchal rigidity with crying when the neck was flexed. Any handling or lifting caused immediate crying. There was occasional gross twitching of the arms and legs. Reflexes were equal and active.

Laboratory—Urine was slightly cloudy yellow and acid. There was a faint trace of albumin but no sugar. Microscopic examination showed only rare leukocytes and no casts. Hgb. 11 grams, WBC was 10,500 with 36% neutrophils, 34% segs and 2% bands, 58% lymphocytes and 6% monocytes. Spinal fluid obtained on admission was colorless and clear. There were 553 cells with 100% lymphocytes. The bacteriologic cultures were negative after seventy-two hours of incubation.

Clinical Course—Shortly after admission, the infant was placed on phenobarbital grains 1/8 q. 4 hr., terramycin drops 50 mgm. q. 4 hrs., penicillin 300,000 u B.I.D. On the second day after admission (8/28/56) his temperature was 102° (R) and his condition was poor. Reticulose was started, 1 c. c. T.I.D. I.M., and within twenty-four hours his temperature was down to normal and remained so until discharge. On 8/29/56 the penicillin was discontinued. On 8/30/56, the Reticulose was decreased to 1 c.c. B.I.D. The baby was now in apparent normal state of health and neurological examination was negative. He was discharged on 9/1/56, the seventh hospital day. The final diagnosis was viral encephalitis.

CASE III. #50067—This two year old white female was admitted to Alexandria Hospital on 10/5/56, with a history of fever and headache since noon the day before admission. She vomited several times but had no diarrhea. She seemed to be incontinent and had frequency of urination. She began to have a generalized clonic convulsion so was brought to the Emergency Room at 3:00 A.M.

Family History—The father had convulsions frequently in his seventh and eight years.

Past History—The child had had Chicken Pox and Whooping Cough but no other diseases.

Physical Examination—On admission the patient was found to be a well developed, well nourished white female who was unconscious and having clonic convulsions. Her temperature was 103.6° (R). Pupils were normal in size and reacted to light and deviated to the right. Chest was clear to percussion and auscultation. Ears, nose and throat were normal. Heart showed no murmur, enlargement or arrhythmia. Abdomen showed no tenderness. Liver, spleen and kidneys were not enlarged. Neurological examination revealed no nuchal rigidity. Kernig's and Babinski's signs were negative. Knee jerks were 2 plus bilaterally but other reflexes were equal and normal.

Laboratory—Urine on admission showed no albumin, but a trace of sugar and a strongly positive acetone. Hemoglobin was 11 grams/100 c.c. and WBC was 18,000 with 70% PMNs. and 30% lymphocytes. Spinal fluid on 10/6/56 was clear and colorless. The total cell count was four per cu. mm. and all cells noted were lymphocytes. Glucose on the spinal fluid was 88.5%, Chlorides 630 mgs% and Total Proteins 11 mgm%. The bacteriological cultures were sterile after seventy-two hours incubation. Chest x-ray on admission was normal. X-rays of knee and wrist showed no evidence of lead poisoning. CO_2 on 10/6/56 was 20 vols.%; HCO_3 was 9.1 meq/1; Ca —10. 6 mgs% P-3.7 mg%; sedimentation rate was 14mm. (Wintrobe) On admission, agglutinations for typhoid, para-typhoid, brucellosis and typhus were negative. On 10/11/56 eosinophile count was 149/cu. mm.

Clinical Course—On admission she was given aspirin, grains 5 q. 4 hr., and alcohol sponge for fever 103° or over. She was given phenobarbitol as needed for convulsions. The next day (10/6/56) she had high fever, 103°-104°, and became cyanotic, stopped breathing and began to convulse again. A tracheotomy was done and some improvement was noticed. She was taken to the operating room where, while in decerebrate rigidity, she had a tracheotomy tube inserted and was given 200 mgm. Nembutal intravenously by a neurosurgeon. This relieved the rigidity and the convulsion stopped. Preoperatively, she was given 250 c.c. of 2½% glucose in ½% saline by clysis; 200 c.c. of 1/6 molar sodium lactate followed, intravenously. She was put on chloromycetin 0.5 gm. I.M. q. 12 hr. and was given 1,000,000 units aqueous penicillin at once. (10/5/56) The next day her condition was worse with fever of 106°. She was again given 1,000,000 units of penicillin I.M. WBC was 9,300 with 40% P.M.N., 58% lymphocytes and 2% eosinophiles. On the afternoon of the second day of hospitalization she was started on Reticulose, 1 c.c. q. 4 hr. This was

changed to 2 c.c. B.I.D. on the fifth day. Immediately after Reticulose was started there was a drop in the temperature and for four days it ranged from 100.6° to 102.6°, with afternoon and evening peak. On the sixth hospital day the temperature was normal and remained so. There was marked general improvement on the 6th day of hospitalization with continued daily improvement from then on. She was discharged on the 15th day with a final diagnosis of acute viral encephalitis.

CASE IV. #39903—This 30 year old white female was admitted to Alexandria Hospital on 1/22/56 with a complaint of onset of severe fatigue. Two weeks before admission she complained of chest pain, and one week before admission she began to have a burning sensation in her chest which ended with tingling in her arms and legs. She was admitted to another hospital on 1/19/56 where she had a normal EKG, spinal fluid and chest x-ray. On admission she complained of severe headache, backache, and pain in her extremities.

Family History—Non contributory.

Past History—Non contributory.

Physical Examination—On admission, the patient was found to be a well developed, well nourished white female who was alert and cooperative. Temperature was 99°, pulse 80, respiration 20. The pharynx was slightly injected and her neck and back were stiff. The chest was clear to P. and A. Heart was normal. Blood pressure was 126/90. The abdomen revealed generalized tenderness, most marked in the upper mid abdomen. Neurological examination revealed that there was a generalized hyperreflexia. Kernig's sign was positive bilaterally. Abdominal reflexes were absent. Brudzinski's sign was negative, although the back seemed stiff.

Laboratory—Urine was negative except for 1 plus acetone reaction. Hgb. 16 gm/100 c.c.; WBC—8,800 with 71 PMNs, 25% lymphocytes, 3% monocytes and 1% eosinophiles. VDRL—negative; CO_2 was 66 vols %. Blood glucose was 77.5 mg% and urea N. was 35.5 mg%. EKG was normal.

Clinical Course—She was put on achromycin—100 mgs IM q. 12 hr., but this was discontinued the next day and she was put on Tetracyn S.F. 250 mgm. q. 4 hr. She was given Nembutal gr. 1½ h.s. PRN and aspirin. She was seen by a neurosurgeon on 1/23/56, whose impression was that she had a viral neuritis (plexitis) with a probable encephalitic component.

For the first four days in the hospital there was no improvement. On the fifth day she was put on Reticulose, 2 c.c. IM B.I.D., and the Tetracyn was discontinued. On the sixth day she was markedly improved, appeared more alert and had no complaints. Temperature was normal. WBC was 6,000 with 60% PMNs. and 40% lymphocytes. Electroencephalogram (done 2/10/56) showed a highly abnormal EEG with spiking on hyperventilation and irregularity. The patient was discharged markedly improved on the eleventh day. The final diagnosis was acute viral plexitis with encephalitis.

CASE V. #52763—This two year old white male was admitted to Alexandria Hospital on 12/10/56, with a history of mumps, ten to fourteen days before admission. His recovery seemed uneventful but on 12/7/56, he began to have fever of 103° (R) and complained of pain in his legs and could not walk. He was seen by a physician on 12/10/56. At this time, his fever was 103°, he looked drowsy and complained of pain upon motion. He had a positive Kernig's sign but no apparent nuchal rigidity. He was admitted for further study.

Family History—Non contributory.

Past History—He had had measles and asthma but no other illness.

Physical Examination—On admission the patient was found to be a well developed, well nourished white boy who was acutely ill but cooperative and alert. His temperature was 102.2° (R). EENT were normal except for enlarged tonsils. His chest was clear to percussion and auscultation. The heart showed no murmur, enlargement or arrhythmia. The abdomen was normal as was the skin. Neurological examination was normal and the reflexes were equal bilaterally. There was a positive Kernig's sign but no nuchal rigidity.

Laboratory—Studies revealed a Hemoglobin of 8 gm. per 100 ml. and a WBC of 10,200 per cmm. with 63% neutrophiles, 33% lymphocytes and 4% eosinophiles. Urine was negative for albumin and sugar. Microscopic examination was negative. Spinal fluid on admission revealed 370 cells, all lymphocytes. Spinal fluid sugar was 69 mg% and Total Protein was 38 mg%. The bacteriologic cultures were negative after 72 hours of incubation.

Clinical Course—The initial diagnosis was mumps encephalitis. He was given aspirin grains 1½ q. 4 hr. and 100 mgm. terramycin IM at once. He was put on Terrabon Elixir, 2 c.c. q. 6 hr., 250 c.c. 2% glucose in 0.45, normal saline given by clysis. On 12/12/56, he was started on Reticulose, 1 c.c. q. 4 hr. IM. Within 24 hours, the fever was down to normal and remained so until his discharge. 250

c.c. of whole blood was given on 12/15/56, to correct his anemia. He was discharged on 12/17/56, (the seventh hospital day) in good condition, with a final diagnosis of mumps encephalitis.

DISCUSSION

The most noteworthy finding as a result of this study is the rapid action of Reticulose in promoting a remarkable therapeutic response, particularly after the lack of beneficial action of various chemotherapeutic agents and antibiotics.

Reticulose was well tolerated by all of the five patients and produced no evidence of toxic manifestations or side effects. None of the patients exhibited any sensitivity or allergic reactions while in the hospital or during their convalescence following their discharge.

There was no discomfort elicited after the intramuscular injections.

In all of the patients there was improvement within twenty-four to thirty-six hours after Reticulose was started, which was manifested by clinical and symptomatic improvement.

The exact method of action of this pharmaceutical product, on the virus, is not fully understood. Since its therapeutic response is so rapid, its action may be considered a direct one. It either alters the action of the virus or inhibits the host cells to prevent virus duplication, or it may do both. In addition, the antigenic properties of the lipo-protein-nucleic acid complex definitely initiates and promotes antibody formation and phagocytosis.

The primary objective in reporting these five cases is to stimulate further investigation in the use of Reticulose in the treatment of viral diseases.

SUMMARY

Five cases of acute viral infections were treated at Alexandria Hospital, Alexandria, Virginia, with intramuscular injections of Reticulose, a lipo-protein-nucleic acid complex, after the apparent failure of the usual antibiotics. Immediate improvement was noted clinically and symptomatically.

From the conclusions reached in studying these five clinical cases, it appears that Reticulose is a definite anti-viral substance and should be considered in the treatment of viral infections.

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Have you made your reservations for the Annual Meeting of The Medical Society of Virginia at The Shoreham, Washington, D.C., October 27-30, 1957?

Thrombosis of the Inferior Vena Cava in Childhood

Report of a Case

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THROMBOSIS of the inferior vena cava has long been a well known entity with its usual, but not invariable, physical findings[1,2,3,4,5]. Descriptions of inferior vena caval occlusion are rarely encountered in English and American pediatric literature and only occasional cases have been reported in children in other medical writings[5,6,7]. The case reported here is remarkable because of the age of onset, the duration, and the paucity of symptoms.

CASE REPORT

This white male was born on February 16, 1949, and underwent pyloromyotomy for hypertrophic pyloric stenosis at the age of six weeks. He was well until May 1950 when he had varicella which was followed in one week by a febrile illness treated unsuccessfully with penicillin. A low grade intermittent fever continued and was later accompanied by cough, listlessness, and twitchings of his arm, hand, and the left side of the face.

He was admitted to another hospital on June 22, 1950, at which time he appeared extremely pale and acutely ill. Fine muscular twitchings of his left arm and leg and the left side of the face were observed. There were no other abnormal neurological findings. The mucous membranes were pale. The spleen was questionably felt. Complete hematological examination indicated a megaloblastic anemia. The spinal fluid sugar and protein contents were within normal ranges but the spinal fluid cell count consisted of 4 polymorphonuclears and 31 lymphocytes per milliliter. He was treated with several blood transfusions and various antibiotics. On the fourth hospital day, his left leg was found to be edematous, red and warm and a diagnosis of thrombophlebitis and cellulitis was made. His subsequent course was stormy but he became afebrile on his 24th day of hospitalization and was discharged. Soon after discharge the boy began to have attacks of grand mal epilepsy and at about the same time the father first noticed dilated veins appearing on the child's abdomen and chest. The attacks of epilepsy continued at about the rate of one attack every two months and he was referred to the University of Virginia Hospital on April 16, 1956, for management of his seizures. Careful questioning elicited no evidence of recurrent phlebitis or other physical disability. Physical examination revealed a well developed and well nourished seven year old white male who was not apparently ill but who appeared to be possibly mentally retarded. A right upper abdominal scar was present. There was no fluid wave or shifting dullness. The liver was palpated 9 cms. below the right costal margin and was of normal consistency. The upper border of the liver was percussed in the fifth interspace. The spleen was felt 3 cms. below the left costal margin. Both legs, especially the left, were enlarged and the skin on the legs was thick and edematous. The muscle mass and bone structure of the legs appeared to be normal. Varices were present in both legs, becoming most prominent in the femoral areas and extending over the flanks to the thorax. Of special note were the greatly enlarged veins arising from the groins and coursing superiorly in a very tortuous fashion. (Fig. 1) Other dilated veins were present on the epigastric and lower sternal areas. The flow was cephalad in all of these veins and they were soft and not tender. Two urinalyses were performed and were normal. One specific gravity determination was 1.015. Microscopic examinations revealed no cellular elements and albumin was not present. Urinary phenylpyruvic acid was not present. Blood counts revealed the hemoglobin to be 14 grams, the hematocrit 41%, the red count 4.87 million/mm^3, the platelet count 467,000/ mm^3, and the white cell count 10,800/mm^3 with a normal differential smear. The stool examination, serological tests for syphilis, and tuberculin tests were negative. The prothrombin time was 15 seconds

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Fig. 1—Photograph showing hepatosplenomegaly and dilated tortuous collateral veins.



Fig. 2—Venogram showing no contrast material in the vena cava but present in the collateral systems. Barium is in the colon and some contrast material may be seen subcutaneously in the left femoral area.

with a control of 12.9 seconds on one occasion and 14 seconds with a control of 12.5 seconds on another occasion. The thymol turbidity was 1.1 T.T. units, the cephalin cholesterol flocculation was 2 plus, and the bromsulphalein retention was 9% in 45 minutes. The alkaline phosphatase was 10.3 Bodanski units, serum cholesterol 197 mgs. per 100 cc., and the Van den Bergh was negative direct and 0.2 mgs. per 100 cc. indirect. Esophagoscopy and fluoroscopy after barium swallow showed no esophageal varices. Five milliliters of ether were inserted into the rectum by a catheter and ether was present on the breath in 26 seconds. The electroencephalographic tracing was consistent with grand mal epilepsy. Venograms, using the right femoral vein, showed utilization of the vertebral system, the intercostal veins, and the azygos. (Fig. 2) No evidence of inferior vena caval flow was present. The height of the thrombosis in the vena cava could only be inferred from the absence of a crossing back of the return flow. Actual determination of the level would have necessitated trans-auricular catheterization from above and the patient's state of well being did not warrant this procedure. The boy has been seen here once since his discharge from the hospital, this visit being due to a mild thrombophlebitis in the saphenous system of the left leg. This soon cleared with rest, elevation, and bandaging of the limb. This episode of thrombophlebitis was considered to have been secondary to venous stasis and had never occurred before.

COMMENT

Most of the naturally occurring cases of inferior vena caval thrombosis are rapidly fatal either because of the causative agent such as tumor or overwhelming infection, or because of the lack of ability to develop sufficient collateral circulation. Death may ensue before compensatory dilatation of the superficial veins over the trunk has had time to develop[8]. A patient who compensates adequately, showing no progression of the thrombosis past the hepatic vein, usually does well and has relatively few troublesome symptoms. Persistent edema of the lower extremities and recurrent thrombophlebitis are the only bothersome sequelae. The typical physical findings include edematous legs with dilated compensatory veins arising below the level of the obstruction and coursing over the flanks to the thorax. The administration of anticoagulants would be in order during the acute episode to retard extension of the thrombus

but after the thrombosis is established the use of anticoagulants would probably be of little use. If the level of a progressing thrombus can be determined, surgical ligation of the vena cava above that point would be indicated to prevent occlusion of the renal veins, and later, the hepatic vein. To our knowledge, no attempt has ever been made to remove a thrombus once established. Excellent results have been obtained in surgical ligation of the inferior vena cava. Although the first recorded ligation was performed by Kocher in 1883 and the second by Bilroth two years later, this entire subject has only recently received more attention since therapeutic ligation of the inferior vena cava is now an accepted procedure[5,9]. The resulting symptoms from therapeutic ligation of the inferior vena cava are remarkably few[9], and may be compared to the paucity of symptoms found in well compensated cases of occlusion resulting from disease processes.

REVIEW OF LITERATURE

The most celebrated case history in the literature is that of Dr. G. M. Humphry who, at the age of 24, while a medical student at Cambridge University, held his breath for sixteen seconds while winning the 120 yards hurdle race against Oxford University (1884). This ordeal was immediately followed by severe lumbar spine area pain and, several days later, by the appearance of massive leg edema and progressive enlargement of the superficial veins. Dr. Humphry actively practiced gynecology and suffered only from recurrent attacks of thrombophlebitis in the enlarged saphenous veins. Albuminuria appeared at once after the accident and persisted throughout life. He wore bandages continuously on his legs for the rest of his life. He died in 1909, 25 years after the thrombosis, of tonsillitis and septicemia. His autopsy revealed the inferior vena cava to be a flat impervious ribbon from the point of entry of the hepatic vein downwards, with both renal veins being closed at their entrance into the vena cava. The renal blood return was thought to have taken place through the veins of the capsules, to the lumbar veins and through the azygos vessels[3,8].

In addition to the case of Dr. Humphry, Weber mentions a case that survived three years and another that lived eight years after thrombosis had occurred[8]. Another case in this same report concerns a 28 year old man who, when examined, "appeared in good health and free from disease" and had a five year history at the time[8]. Mitchell reported a 32 year old man who had thrombosis of both the superior and inferior venae cavae, these being demonstrated on post mortem examination[10]. These latter two cases and our case are remarkable in that albuminuria was not present.

Stevens mentions a 19 month old infant who survived two months with the symptoms of thrombosis, death being due to hemorrhagic renal infarction secondary to extention of the vena caval thrombosis in the renal veins[11]. The initial thrombosis in this case was attributed to dehydration and infection. Derow reported a 15 year old boy who had chronic progressive occlusion of the inferior vena cava, renal and portal veins, giving a clinical picture of the nephrotic syndrome[6]. This patient survived 17 months after the signs of thrombosis were apparent. Most of the cases of inferior vena caval thrombosis reported in infants and small children have been associated with fatal hemorrhagic infarction of the kidneys.

Birnberg described a fatal case of thrombophlebitis migrans in a 14 year old boy who, on post mortem examination, showed "several old thrombi in the midportion of the abdominal vena cava" but these did not occlude the lumen[12]. We do not believe that our case represents thrombophlebitis migrans since it occurred at a very early age, was preceded by saphenous thrombophlebitis and leg cellulitis, and because the child has had only one episode of thrombophlebitis since his initial illness. Also, the superficial veins in this case are soft and do not exhibit the cordlike masses, representing old thrombosed veins, as are seen in thrombophlebitis migrans.

Since venograms indicate that our case has occlusion above the level of the renal veins we must surmise that his thrombosis progressed slowly enough to allow collateral renal venous channels to develop, probably by way of the capsules. Our case shows no evidence of canalization of the thrombus which is said to occur in some instances[5]. We do not know if he had hematuria and proteinuria with the initial thrombosis but his present normal urines do not preclude renal vein obstruction. We believe that our case needs no treatment for his condition other than bandaging of his legs to reduce the edema and as protection against recurrent phlebitis. He has suffered thrombophlebitis one time only during the six years since the initial incident.

SUMMARY

A case of chronic inferior vena caval thrombosis in a seven year old boy is presented and discussed. The thrombosis apparently developed following cellulitis and thrombophlebitis of the legs when the child was sixteen months old. The diagnosis was

suspected because of the typical physical findings and was substantiated by venograms. A few minor alterations in liver function were found but renal function appeared normal. The prognosis in this condition seems dependent on the causative agent and on the ability to establish quickly adequate collateral circulation.

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Ear Wax Should Be Removed

Wax in a swimmer's ears—particularly in only one ear—may lead to serious or even dangerous consequences. Dr. Albert P. Selzer, a Philadelphia otolaryngologist, said that dizziness sometimes occurs when a person swims in cold water which enters his ears and causes abnormal activity in the ear's labyrinths where the sense of equilibrium is controlled. The dizziness may lead to an inability to tell the position of the body, panic, or even drowning, he said in the May Archives of Otolaryngology, published by the American Medical Association.

Dizziness is especially likely to occur when only one ear is clogged with wax. Cold water cannot reach that ear's labyrinth, but does reach the labyrinth of the unclogged ear. This sets up two different unbalanced reactions and produces dizziness and inability to tell body position. In a person with wax in both ears or in neither ear, the labyrinths' reactions to cold water are the same and there is no dizziness.

Dr. Selzer pointed out that dizziness resulting from wax in only one ear is not confined to swimmers. It may also occur when cold air reaches the labyrinth of only one ear.

Dr. Selzer is assistant professor of otolaryngology at the University of Pennsylvania Graduate School of Medicine.

Diphenylhydantoin in Tic Douloureux and Atypical Facial Pain

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TIC DOULOUREUX is one of the frustrating conditions of medical therapeutics. The exact mechanism of this disorder is not understood and the fact that numerous modalities have been attempted in an effort to conquer this illness indicates that no one method is uniformly successful.

The use of diphenylhydantoin (Dilantin) in atypical facial pain was introduced by the German physicians Winiker-Blanck, E.; Albrech, K.; and Krump, J. These authors saw fairly frequently patients who had received various forms of therapy including nerve section, nerve block, injection with alcohol, B_{12} and stilbamidine therapy, none of which had been successful. In an effort to try and help these people, several of them were started on Dilantin empirically.

Over a period of two years we have successfully treated nine cases. In most instances the drug produced relief of symptoms within twenty-four hours. Frequently the first capsule gave relief. These patients have been subjected to nearly every form of therapy recommended for the treatment of this condition and it is difficult to believe that the drug had a placebo effect in view of the relief of such a simple procedure when so many dramatic manipulations had failed. The pain was fairly well controlled as long as the drug was continued. It was also found that small doses would produce the desired effect. Most patients responded to 1½ grs. given three times a day.

CASE REPORTS

Case 1. A sixty-five year old white female was initially seen because of agonizing pain located above the right side of the lip of excruciating intensity which had failed to respond to large quantities of Demoral. The patient had a characteristic history of tic douloureux and had been under treatment for some period of time. She had had an operation on the lower portion of the sensory root of the right trigeminal nerve. The motor root was preserved and fibers of the first branch also were preserved since these did not appear to be involved. The patient apparently did well for several months when she had a recurrence of her pain, but she refused further surgery and attempted taking opiates.

The patient was hospitalized and given a course of intravenous hydroxy-stilbamidine which had very little effect on the course of her condition. She was started on Dilantin and within twenty-four hours she was pain free and has remained remarkably so over a period of two years. Some exacerbations requiring an increase in dosage have occurred, however, as long as she continues to take the medicine regularly she does well.

Case 2. An eighty year old white female was seen in consultation with lancinating facial pain. Surgery had been recommended. In view of the patients' age, the family was extremely reluctant to attempt such procedure. An attempt was made to control the the pain with demoral to no avail. The patient was started on Dilantin and on this therapy she experienced almost complete relief. The pain, however, recurs when the drug is discontinued for several days. The patient has been maintained very comfortably for more than a year and a half.

Case 3. A middle age white female with typical history of tic douloureux had been injected on two occasions for this condition with procaine which had resulted in only temporary improvement. This particular case experienced relief of pain within two hours of taking the first capsule and has remained so for several months.

Case 4. A fifty-five year old colored male with severe facial pain radiating to the back of the head and neck, diagnosed as atypical tic douloureux, had been studied intensively. The patient had been given a course of histamine and B_{12} injections. Operation had been recommended and the patient was intending to return for this procedure. He was started on Dilatin and within the first day of therapy obtained complete relief of pain and has continued so for more than three months.

Case 5. A forty-five year old white female suffered severely over a period of three to four years from tic douloureux and had received novocain injections, stilbamidine, B_{12} and ultra-sonic therapy in an effort to eliminate the condition. The patient

resisted taking the medication initially because of the pain involved in swallowing. She was started on 1½ grs. three times a day and experienced an immediate relief of pain within the first day of therapy, but became somewhat groggy on this dosage. The dosage was reduced to ¾ grs. three times a day. The patient has done well over the past four months.

Four other cases have been treated with similar results. Several patients, in addition, have been treated by my colleagues with excellent improvement.

SUMMARY

The drug Dilantin appears to be an adjunct in treatment of atypical facial pain and tic douloureux. The action is not understood. Its effect appears to be very prompt and somewhat specific. The medication is deserving of a trial before more drastic measures are undertaken.

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Relation of Hypertension and Salt

A recent study of more than 1,000 adults has confirmed earlier findings that the amount of salt eaten is probably a "primary factor" in the development of one type of high blood pressure. Dr. Lewis K. Dahl and Robert A. Love, Upton, N.Y., reported the new study on the relationship of sodium chloride to essential hypertension (high blood pressure without known cause) in the May 25 Journal of the American Medical Association.

Among 1,346 employes of the Brookhaven National Laboratory, they found that persons with low-salt intake had "significantly less" hypertension and those with high intake "significantly more" hypertension than would be expected by chance.

Classified according to sodium chloride intake, there were 135 persons with low intake; 630 with average intake, and 581 with high intake. The distribution of the 105 persons with hypertension was one in the low-intake group, 43 in the average-intake group, and 61 in the high-intake group. The probability of such a distribution occurring by chance is less than one in a thousand.

The incidence of hypertension among non-overweight persons with high-salt intake was several times that among similar individuals on a low-salt diet. It was most prevalent among persons who were overweight and consuming large quantities of salt.

Although it has been suggested that persons with hypertension have an increased appetite for salt, the doctors said that their patients who have been placed on low-salt diets after always eating large quantities of salt have not developed cravings for it.

It is known that overweight persons suffer from hypertension more commonly than do non-overweight individuals. One possible explanation may be that "in eating more food generally, more salt is ingested simultaneously."

Medical Practice in the Jamestown Colony

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THE FIRST English surgeon to set foot on Virginia soil was Henry Kenton who was attached to a fleet exploring the Virginia coast in 1603. Kenton was ambushed and slain by Indians when he went ashore with a landing party. He thus became the first English doctor to land on the North American continent. English physicians were greatly interested in the scheme to colonize Virginia. They gave advice as to the location of the colony and made recommendations to safeguard the health of the settlers. When Jamestown was founded in 1607, two surgeons, Will Wilkinson and Thomas Wotton, were among the settlers. Wotton's services were praised by Captain John Smith and Wotton is later referred to as the Surgeon General of the Colony. Dr. Walter Russell was the first physician to arrive in Jamestown. In England at that time there was a distinct line between physicians and surgeons. The former were better educated than the latter and indeed the physicians who were usually men of better families looked down on the surgeons who had only recently divorced themselves from the barbers. During an exploring expedition in 1608, Dr. Russell was credited with saving the life of John Smith when he was stung by a strange fish.

The second physician to arrive in Jamestown was Dr. Lawrence Bohun who came over with Lord Delaware in 1610. He is described in the chronicles as "a long time brought up amongst the most learned surgeons and physicians in the Netherlands." Bohun was praised for his diligence in the "preservation of our men's lives assaulted with strange fluxes and agues." When Bohun's medical supplies ran low he began to investigate the medicinal properties of the plants which grew around Jamestown, such as sassafras, rhubarb, and the gums of certain trees. The gum of one tree, he thought, was good for diarrheal disorders and he advised all physicians who might come to Virginia to make use of it. Returning to England he was appointed Physician General of the Colony and given an allotment of 500 acres of land. On the way back to Jamestown in 1620 his ship was attacked by a Spanish man-of-war during which engagement Bohun was mortally wounded.

Dr. John Pott was sent out by the Virginia Company to replace Bohun. Pott was a man of good medical education and ability, but his taste for politics was to involve him in many bitter disputes during the twenty years he lived and labored in Jamestown. During his very first year in the colony, word reached the indignant Company directors in London that the colonists, after making a peace treaty with the Indians, had poisoned a great many of them and that Dr. Pott was one of the ringleaders in this trick. The doctor was therefore removed from his place on the Board of Directors of the Virginia Company, although he later managed to be reinstated. Pott was a politician as can be seen from a letter written to London about him by another colonist: "Dr. Pott keeps too much company with his inferiors who hang upon him while his good liquor lasts."

In 1625 Dr. Pott was sued by a Mrs. Blaynie who blamed him for her miscarriage. It all came about in this way. Pott had given his servants strict orders that all hogs which trespassed on his corn were to be killed and butchered for his table. Mrs. Blaynie was apparently the owner of four hogs which met this fate and she therefore felt she was entitled to a share of the meat. She accordingly sent word to Pott that she wanted a "peece of hog flesh." When the meat was not forthcoming she became so upset that she had a miscarriage, she alleged. The resourceful Pott contrived to convince the Court that he did not intentionally refuse the hog meat to Mrs. Blaynie. Therefore, the Court ruled that even though the denial of the hog meat had undoubtedly been the cause of the miscarriage, Pott could not be held responsible because he thought that his wife had already sent the meat to Mrs. Blaynie. "As for the hogs," said the Court, "whosoever they were there is no damage due from Dr. Pott to the owner of the hogs because the spoil they did his corn was as great as the value of the hogs or greater. But his killing and eating of them without a legal order was irregular and liable to censure."

Even though Dr. Pott made many bitter enemies he was universally respected as a physician. In 1627 the authorities had a boat built for him, for the James River was the only means of transportation and the settlements were scattered along the water-

front. Pott must have been a familiar sight along the river as his servants rowed him from one place of sickness to the other. He hospitalized patients in his own home as was to be the custom with physicians during that century. Pott had a very able apprentice named Richard Townshend. In 1626 this apprentice sued his master because he was failing to teach him his craft. The Court ordered that Pott must teach his apprentice with all due diligence or be compelled to pay Townshend for all the time he had spent with him.

In this same year Dr. Pott became involved in a lawsuit with the Secretary of the Colony over the ownership of some cows. Pott was able to produce some certificates to prove his points and the cows were ordered to remain in his possession. However, one suspects a political angle to this suit, for two years later Pott was appointed Governor of the Colony, a post he held for one year. In 1630 a new Governor came over from London, Sir John Harvey. Sir John took an immediate dislike to Pott and the two men became unrelenting enemies. Before long, Governor Harvey had Pott arrested on three separate charges which showed that he had been going over Pott's career in the colony pretty thoroughly. (1) "pertaining to willful murder" (this undoubtedly had to do with the poisoning of the Indians); (2) "marking other men's cattle as his own" (the dispute over the cows with the Secretary of the Colony); (3) "killing up other people's hogs." The jury, handpicked by Governor Harvey, found Pott guilty and ordered his estates confiscated, but the popular clamor in favor of Dr. Pott was so great that he was shortly pardoned by the King.

From then on it was war to the end between Pott and the Governor. Pott and his clique attempted to foment rebellion, so Harvey rearrested Pott and put him in chains. He was soon forced to release Pott. Pott then secured Harvey's recall to England and went along on the same ship to see that Harvey got his just desserts. But in England Harvey got to the proper ears and the King reappointed him as Governor. Sir John Harvey returned to Jamestown in triumph while Pott stayed in England to work for Harvey's downfall. Eventually Pott had the satisfaction of seeing Harvey again recalled and his friend Sir Frances Wyatt sent out as Governor. This time it was Pott who returned in triumph. Dr. John Pott died around 1642 after 20 years of a prominent medical and political career in the Jamestown Colony.

Another physician of this period was William Norton who was killed in the Indian massacre of 1622. He is thought to be the same Norton who established the glassworks at Jamestown, bringing over a number of Dutch, Polish and Italian artisans to get the plant going. It can be seen that the doctors of the Jamestown colony did not confine themselves to medicine alone by any means, but were also land owners, farmers, businessmen, explorers and soldiers. Dr. Robert Pawlett was a preacher as well as physician and surgeon. Many other physicians and surgeons practiced briefly in Jamestown but they only stayed a short time or else died in the numerous epidemics and Indian raids. Ships surgeons also practiced on land and sometimes took up residence for a while in the colony where many of them owned land. Of all these, however, Russell, Bohun, Pott, and Pawlett alone seemed to have been men of formal medical education, probably representing the best British medicine of that time. Throughout the remainder of the century the colony was served by physicians who were largely homegrown, being self-instructed or the product of local apprenticeships.

The death rate in the Jamestown Colony was appalling. During the 100 years of the colony's existence more than 100,000 Englishmen immigrated to Virginia, but at the end of that century there were only 75,000 souls in the colony. This means that in spite of the natural increase by births in the colony there was in 1700, 25,000 less people than had immigrated during the preceding 100 years. Between 1607 and 1625 more than five out of every six settlers died after arriving. The chief causes of death during these early days were Indian massacres, famine, beri beri, scurvy, and dysentery which was known as the "bloody flux". Practically every one who arrived in Virginia in the summertime fell a victim to the diarrhea. This was looked upon by all as a peculiarity of the climate and was spoken of as "seasoning". This "seasoning" for new arrivals was felt to be as inevitable as we feel about mumps and chickenpox in children at the present day. In addition, the colonists were plagued in winter by epidemics of such diseases as influenza, pneumonia, smallpox and a very vicious form of measles. Now and then incoming ships which had stopped in the West Indies would bring in such exotic diseases as plague and yellow fever. In fact, the colonists liked to blame much of their disease on the immigrant ships on which many people sickened and died during the long, crowded voyage from England. The sickness on the ships was attributed to the beer which was used for drinking purposes. Englishmen of that period must always have their

beer for it was believed that water drinking was unhealthy. The English brewer, Dupper, was roundly cursed for his "stinking beer" which, it was thought, caused the death of 200 people in one epidemic in Jamestown.

However, it must not be supposed that the colonial authorities were totally lacking in notions of sanitation, for the regulations of 1610 forbade throwing waste water into the streets and all washing had to be done at least 40 feet from any well or pump. "Nor shall any one within less than a quarter mile from the pallisades dare to do the necessities of nature, since by these unmanly, slothful, and loathsome immodesties, the whole fort may be choked and poisoned with ill airs and so corrupt (as in all reason cannot but much infect the same) and this shall they take notice of, and avoid, upon pain of whipping and further punishment." In 1612 an eighty bed hospital was built at what is now Dutch Gap, but it is thought to have been destroyed in the massacre of 1622. This hospital, located fifty miles up the James River from Jamestown, was the first hospital in Virginia and the first on the North American continent.

The sharp distinction between physician and surgeon prevalent in England tended to become blurred in the New World. Surgeons dispensed medicine and physicians performed surgery. Abdominal surgery was, of course, never done, surgery being limited to the outside of the body only. This included treatment of wounds, fractures, dislocations, amputations, abscesses and ulcers. The remedies used are the same as those used in England at the time plus a few native drugs. Sassafras was highly esteemed for dysentery, nephritis, skin diseases, gout, rheumatism and syphilis. Snake root was considered a good tonic, diuretic, diaphoretic and useful in the treatment of typhoid, digestive disorders, gout, rheumatism and amenorrhea. Many thought that tobacco also had curative powers. Quinine was not used, for English physicians were opposed to its employment until late in the century.

As might be expected seventeenth century doctors were long on treatment and short on diagnosis. For instance, it was believed that palpation of the radial pulse gave specific diagnostic information. Many still believed the teaching of Galen who asserted that there was a characteristic pulse for every disease. A very interesting diagnostic procedure of this time was what was called uroscopy. The doctor held a flask of the patient's urine to the light and believed that he could diagnose disease in other parts of the body by the color, opacity, smell, weight, and even taste of the urine. The Reverend John Clayton, who was a Church of England minister at Jamestown from 1684 to 1686 also practiced medicine. He wrote to the Royal Society of which he was a Fellow, as follows: "I had glasses which would hold about five ounces, others about ten ounces, with necks so small that a drop would make a considerable variation. With these I could make much more critical and satisfactory observations as to the specifical gravity of liquors, having critical scales, than by any other way yet by me tried. I used this method to weigh urines, which practice I would recommend to the inquisitive and critical physicians. By weight I find observations may be made of affections in the head, which rarely make any visible alterations in the urine."

The methods of treatment of that time included blistering, sweating, vomiting, cupping, blood-letting, and, of course, much purging. This was the century of the clyster, which was a form of enema administered with a wooden syringe. This syringe was so large that it was carried over the shoulder like a modern rifle. The dietary habits of the people in both Europe and the New World were such that obstinate constipation was highly prevalent. Even people of the highest station suffered from fecal impactions which had to be softened, loosened and expelled by means of clysters. These fecal impactions were spoken of as "infarcts" and were considered the source of many diseases just as in our own time "auto-intoxication" from the bowel which has been considered a cause of disease. People of the seventeenth century used to talk about their fecal "infarcts" much as modern people brag about their operations.

During the first years of the Jamestown Colony medical service was furnished free. Later when the colony became crown property the physicians charged fees. All throughout the century tobacco served in lieu of money. It was the chief crop of the colony. Wyndham Blanton tells us, "In general the seventeenth century physician received from thirty-five to fifty pounds of tobacco for a visit." Dr. Robert Ellyson asked 600 pounds of tobacco for reducing a shoulder. The care of a burnt hand was considered worth 80 pounds of tobacco; putting up a rupture, 50 pounds of tobacco; blood-letting was 20 pounds of tobacco which was also the fee for cupping. The charge for a clyster was 30 pounds of tobacco. The charge for attendance on a prolonged case of illness ranged from 500 to 1500 pounds of tobacco.

In 1699 the capital of Virginia was moved from

Jamestown to Williamsburg and with the dawn of the eighteenth century the physicians of Virginia entered upon a new era. The culture of Williamsburg, with its college, Governor's Palace, House of Burgesses, church, theater, fine residences, societies for intellectual improvement, balls, fetes and high life, was far ahead of the primitive rudeness of Jamestown. The doctors of Williamsburg were well educated gentlemen who had studied medicine in Edinburgh, London and on the Continent. Their fame spread so that men like Washington came down from Mount Vernon for diagnosis and treatment. One of the most prominent was Dr. James McClurg, a native of Hampton, who studied medicine in Edinburgh, London and Paris. Dr. John de Sequeyra of Williamsburg, who is variously described as an Italian and a Portuguese, was credited by Thomas Jefferson with introducing the eating of the tomato into America. Previously it had been considered more a flower than a vegetable.

It is now 354 years since Dr. Henry Kenton set foot on the shores of Virginia only to meet a violent death at the hands of savages. A few years later Dr. Lawrence Bohun lighted the lamp of medical learning on this soil as he sought medicinal value in the plants and trees around Jamestown. Could Bohun return today he would be proud of the two fine medical schools in this state. On the other hand, Virginia physicians may well be proud of Bohun and those other rugged doctors who practiced the healing art in the wilderness three centuries ago.

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Blood Tests—Paternity Suits

Blood-grouping tests should be carried out in uncontested paternity suits as well as in contested ones. Tests for matching the child's blood with that of the supposed father are used now only when the accused man denies paternity. If the man admits paternity, he is not given a blood-grouping test.

However, a study of 67 "typical" cases in which the men admitted paternity in court showed from 12 to 18 per cent of the men were probably not the fathers of the children they accepted in the court, according to Dr. Leon N. Sussman, attending physician at Beth Israel Hospital, and Sidney B. Schatkin, LL.B., assistant corporation counsel of the City of New York. In addition previous studies have shown that from 30 to 40 per cent of the men who deny paternity and who are given blood tests are falsely accused. Thus, in the interests of justice, a blood test should be ordered in every case involving a charge of paternity, the authors said in the May 18 Journal of the American Medical Association.

The authors studied blood tests performed on involved persons after their uncontested suits were settled. The method was the usual one of duplicate testing by different technicians using different lots of blood serum. The three standard groupings, A-B-O, M-N, and Rh-Hr, were tested, as well as two lesser known groups. The tests indicated that of the 67 men involved, six "absolutely" were not the fathers of the involved children. Since earlier studies have shown that tests using the three standard groups can clear only 50 per cent of falsely accused men, it follows that not six but 12 of these men were probably not the fathers of the children they accepted.

Although the number of cases studied was small —due to difficulty in obtaining cooperation of persons after their cases were closed—the figures have "a significant bearing" on the reliability of admissions of paternity which are "routinely and perfunctorily" accepted daily in court.

The motivation for these admissions of paternity without scientific proof are interesting. Usually a man admits to paternity for one of the following reasons: a sincere belief that he is the father; a sense of pride arising from the fact that he could be the father; no feeling of responsibility; inability to afford defense and blood tests costs, or a misunderstanding of the meaning of paternity.

Clinicopathological Conferences

Of The Medical College of Virginia Hospital

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Case 197 (49310)

A 40 YEAR OLD colored female was admitted to St. Philip Hospital on September 20, 1956. She apparently had been in good health until September 7th, when she developed chills and fever and complained of weakness. Treated by her local physician, she apparently improved, but on September 9th she developed abdominal pain, vomited, and had more chills and fever. Thereafter her fever seemed to subside, but she continued to complain of weakness and, therefore, was referred to the hospital.

She admitted to having had frontal headaches and dizziness for several months with polydipsia and nocturia. Her appetite had been poor for two weeks. Her history was otherwise negative and the family history non-contributory.

Physical Examination: B. P. 220/160. Temperature 100.4 (R). Pulse 120. Respiration 24. The patient was markedly obese, weighing 220 lbs., and appeared moderately ill. The skin was warm and dry and the tongue and mouth were quite dry. The general physical examination, including pelvic and rectal examinations, was essentially negative except for the obesity and mild calf tenderness bilaterally.

Laboratory Data: Hgb. 10.5 grams, RBC 3,400,000. WBC 13,500 with 67 polys., 1 eos., 1 bas., 25 lymphs., and 6 monos. A catheterized urine specimen revealed specific gravity 1.012, acid reaction, 3+ albumin, 4+ sugar, negative acetone, 23-30 WBC and a rare cast/hpf. Blood sugar 540 mgm.%. BUN 30 mgm. %. CO_2 21, chlorides 90, sodium 128, potassium 5.4 mEq/L, respectively. Total serum protein 6.9 grams % with albumin 2.1 and globulin 4.8. The serology was positive. Chest x-ray showed slight prominence of the left ventricle and a slightly tortuous aorta with grossly clear lung fields. An electrocardiogram was normal.

Initial therapy included 20 units of regular insulin, 600 cc. normal saline, a 1200 calorie diet, and sulfisoxazole, 1 gram every four hours. Further insulin was given on a sliding scale and averaged around 25 units daily for the next 5-6 days. Thereafter the urine was essentially sugar-free and no further insulin was given. A fasting blood sugar on the day after admission was 173 mgm. % and thereafter varied between 88 and 168 mgm. %. For the next week the patient continued to run a temperature elevation of around 101°. E. Coli was cultured from the urine and was said to be sensitive to tetracycline. Sulfisoxazole was then discontinued and tetracycline begun in a dosage of 250 mgm. q.i.d. The temperature thereafter gradually declined and by September 27th was normal. The patient seemed to feel better. On September 27th an intravenous pyelogram showed no dye excretion in thirty minutes. On September 29th the BUN had risen to 66 mgm. % with creatinine 2.5. At this time the CO_2 was 19, sodium 92, chlorides 130, potassium 5.3 mEq/L, respectively. Serum calcium 10.2 mgm. %, serum phosphorus 8.0 mgm. %, and alkaline phosphatase 3.8 Bodansky units. Subsequent urinalyses revealed no albumin and only 5-10 WBC/hpf, but a 24-hour urine collection on September 21st revealed 4.1 grams of albumin in a volume of 2300 ccs. The urine output remained good. Retrograde pyelography on October 1st showed normal indigo carmine excretion bilaterally, but suggested incomplete filling of the lower half of the right renal sinus. On the following day repeat studies showed good filling of this kidney.

Because of the positive serology, a lumbar puncture was done. The spinal fluid was negative. The patient was given 12,000,000 units of procaine penicillin over a ten-day period.

The patient continued to do well and was scheduled for discharge. However, on October 6, 1956, the patient expired suddenly, having been up walking around the ward in good spirits a half-hour prior to her demise. An autopsy was obtained.

CLINICAL DISCUSSION

Dr. E. Lovell Becker*: This very interesting but confusing case presents several problems which we will take in succession. In reviewing the history we find that we have little positive information with which to investigate the problems. There is a story of vomiting, chills, and fever, together with polydipsia, nocturia, frontal headaches, dizziness and poor appetite for a period of several weeks prior to admission to the hospital. Physical examination revealed an obese, hypertensive female with a rapid pulse, rapid respiration, and a temperature of 100.4 (R). Laboratory data showed a patient with a high blood sugar (540 mgm./100cc) which could cause a hemodilution by virtue of the osmotic effect of the sugar. In view of this, the hemoglobin could be considered as normal for the values found in this hospital. There is slight elevation of total protein if one considers the hemodilution and 7.5 mgm/100 cc is the upper limit of normal for this laboratory. Low albumin with a high globulin is noted. The low albumin could be due to urinary loss and the high globulin as a result of stimulation of gamma globulin by chronic infection. During the course of the hospital stay the patient's diabetes was brought under control, but a positive urine culture was obtained for E. Coli. Urinalyses showed a more or less fixed specific gravity with marked albuminuria and glycosuria, together with white blood cells and occasional casts.

The conditions which most commonly come to mind are intercapillary glomerulosclerosis, or Kimmelstiel-Wilson's disease, chronic glomerulonephritis and chronic pyelonephritis. In differentiating these three interesting diseases affecting the kidney, let us first consider the fact that pyelonephritis is by far the most common of the disorders. It is considered more prevalent than chronic glomerulonephritis, and usually patients with this condition come under observation when they have hypertension and/or renal insufficiency. An extremely high blood pressure may result from pyelonephritis. However, either glomerulonephritis or pyelonephritis can produce the clinical picture of malignant hypertension with hypertensive retinopathy, but we have no indication of eye ground changes, consequently, we are at a loss on this point. The finding of pus in the urine and only a few red cells is in favor of pyelonephritis, for hematuria is usually more marked in glomerulonephritis. A very few casts are noted, and in chronic pyelonephritis this is certainly the situation; only in the terminal stages do we have more abundant large granular and waxy casts. The proteinuria is marked, but is not 4+ which is the more common finding in the nephrotic stage of glomerulonephritis. Usually the urine is sterile in glomerulonephritis, but in pyelonephritis organisms may be found. Edema occurs only in the late stages of pyelonephritis, is usually slight, and most always of cardiac origin. Variable pyelographic findings have been reported in pyelonephritis. One group reports 22.6% normal pyelograms, minimal changes in 54.7%, and moderate changes in 15%, and marked changes in 7.5% of 159 cases of chronic pyelonephritis. The changes reported consisted of various dilatations, constrictions or distortion of the pelvis and ureters.

Glomerulonephritis is a rare condition in combination with diabetes. In view of this and of the other findings of this patient, I think we can rule out the diagnosis of chronic glomerulonephritis. It is on the basis of lack of edema, lack of large numbers of red cells in the urine, and the lack of history compatible with glomerulonephritis, and the coincident finding of diabetes, and the low grade proteinuria. In considering Kimmelstiel-Wilson's disease, intercapillary glomerulosclerosis, and chronic pyelonephritis, we find several interesting problems. Classically glomerulosclerosis consists of a triad of hypertension, edema, and diabetes. The lesion typically involves the glomerules and the tubules, and as reviewed by Dr. Kimmelstiel, the specific morphological changes take place in the epithelial layer of the glomerular tufts in contact with mesenchyme, in the parietal layer of Bowman's membrane, and in the tubular basement membrane. Further, in the middle-aged patient, hypertension and nephrosis commonly occur together, whereas in the juvenile diabetic the nephrotic syndrome is most pronounced and often precedes the hypertension, and in the older aged group hypertension is predominant, while a nephrosis may be entirely absent. Mendlow and Brill (in the J. of the Mt. Sinai Hospital) reviewed 109 post mortem cases of diabetes mellitus; 32% or 35 cases showed intercapillary glomerulosclerosis and it was apparently not related to age or sex, nor to the clinical severity of the diabetes. However, there was direct relationship to the duration of the diabetic symptoms particularly when of long duration. Only 9 of the 35 cases, or 26% displayed the classical triad of hypertension, albuminuria, and edema. Further, it has been pointed out that in Kimmelstiel-Wilson's disease doubly refractile fat bodies are quite often found in the urine and repre-

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sent tubular disease. In this patient, the urine was not examined for doubly refractile bodies, nor was it examined for "glitter cells" which may be indicative of pyelonephritis, although not diagnostic.

In summary then, in view of the short duration of the diabetes and the lack of edema, I feel that we can more or less exclude the diagnosis of Kimmelstiel-Wilson's disease.

In support of pyelonephritis as a primary disease problem, there is no past history to support the question of acute pyelonephritis, although it is most often seen in females and dates to pregnancy. The disease predominates in females up to the age of 50, after which the male may be more prominent, but yet no great sex predominance. This is due to prostatic enlargement in the male. The colon bacillus is the organism most often cultured from the urine, but many cases have been reported due to aerobic and anaerobic streptococci and staphylococci, aerobacter, pyocyaneus and many other bacteria. Particularly in obstructive cases are mixed infections common. The disease may be bilateral, or less often unilateral. In the kidney involved, one most always encounters a mixture of both acute and chronic inflammatory processes and some scarring. Normally the kidneys vary in size from normal, or even slightly enlarged, to extremely small organs. In our x-ray findings there is a deformity in the right ureter, and the size of the right kidney is the upper limit of normal, if not slightly enlarged. Further, there is difficulty in filling the lower pelvis of the right kidney.

Clinically in pyelonephritis it is not rare to have patients come under clinical observation only after uremia has developed and they apparently have had the disease for many years. Pyuria is the classic sign of pyelonephritis. Proteinuria varies greatly. Usually the urine does not contain more than a trace to 1 or 2 grams daily. However, there may be several times this amount and it is a source of confusion with glomerulonephritis, as in this patient the daily output was 4.1 grams. The bacteria most commonly found are the colon bacilli and this can give rise to an acid urine. Renal function in these patients is markedly impaired and sooner or later there is hyposthenuria, and decreased clearances.

Tumors of the Kidneys: The x-ray findings are suggestive of enlargement of the right kidney. This may be compatible with tumor, and I use the word "tumor" in the literal sense to mean "any morbid swelling". Renal tumors can be classified as follows:

1. Connective Tissue Tumor
   (a) Fibroma
   (b) Lipoma
   (c) Leiomyoma
   (d) Hemangioma
   (e) Tumors associated with tuberous sclerosis
   (f) Sarcoma
2. Epithelial tumors
3. Wilms' tumor
4. Tumors of the renal pelvis

It must be pointed out that this is for the sake of completeness. I do not have any information in the history or physical examination to make a diagnosis.

In summary, then, the patient has a story compatible with chronic pyelonephritis, a history and laboratory findings of diabetes mellitus and hypertension. Further, there is suggestive evidence to indicate that there is some involvement of the right kidney by a process other than pyelonephritis. For this reason my clinical diagnosis would be (1) diabetes mellitus, (2) chronic pyelonephritis bilaterally, and (3) hypertensive cardiovascular disease, and (4) tumor of the right kidney.

Even though we can speculate as to a clinical diagnosis, the cause of death in this patient is obscure.

If we consider the causes of sudden death, the first category may be the so-called instantaneous death, the second category death in several minutes, and the third category death in several hours. Causes for instantaneous death are rather limited, and are more frequently attributable to alterations in coronary circulation, or ventricular fibrillation. Death within a few minutes can be due to a rupture of a major vessel, and death in several hours to a great variety of conditions.

It is most interesting to speculate on the causes of unexplained instantaneous death as is probably the case in this patient. I would refer to the article of Dr. Soma Weiss which appeared in the New England Journal of Medicine in 1940 in which he points out in cases of sudden death the post mortem examination frequently fails to explain the mechanism of death. In the majority of cases the underlying structural lesions are chronic and do not contribute to the cause of death. In instantaneous death fresh lesions are often absent.

"In the causation of instantaneous death a hyperirritable myocardium of anoxic or infectious origin and hypoactive reflexes singly or in combination play the most important roles. The functional capacity

of the heart before death in these cases may be adequate or good. The determining factor in instantaneous death is often physiologic."

Unfortunately the mechanisms of instantaneous death have been little studied. So seldom are physicians or people in attendance when a patient dies in this manner.

Dr. E. Lovell Becker's Diagnosis

1. Diabetes mellitus
2. Chronic pyelonephritis, bilateral
3. Hypertensive cardiovascular disease
4. Tumor of the right kidney

Pathological Diagnosis

1. Chronic xanthogranulomatous pyelonephritis, bilateral
2. Diabetes mellitus
3. Coronary atherosclerosis with focal myocardial fibrosis
4. Acute pulmonary edema
5. Fatty metamorphosis of the liver
6. Obesity

DISCUSSION OF PATHOLOGIC FINDINGS

Dr. Gordon R. Hennigar:* The body at autopsy was markedly obese, weighing approximately 200 lbs. measuring 62 inches in length. There were no external lesions noted. No serous effusion was found. The heart weighed only 300 gm. and there was slight hypertrophy and dilatation of the left ventricle. The coronary arteries were moderately atherosclerotic and the left ventricular myocardium showed focal ischemic scarring on microscopical examination. The lungs were congested and showed moderate edema without evidence of pneumonia. The death in this case can be best explained on the basis of coronary sclerosis and acute coronary insufficiency. The liver was enlarged weighing 2300 gm. and showed very marked fatty metamorphosis which was most likely due to poorly controlled diabetes mellitus and obesity. There was no appreciable centrilobular congestion of the liver. The gallbladder was the seat of chronic cholecystitis. The biliary tract showed no gall stones or obstructive lesions. The pancreas showed slight acinar dilatation which is often present in uremia. The islets of Langerhans showed no remarkable findings. The gastrointestinal tract was essentially normal.

Both kidneys were enlarged and covered with thick, indurated, fibrotic adipose tissue. The right kidney weighed 450 gm. and was largely replaced by white, firm, tumorous tissue (Fig. 1). The left kidney showed similar changes in the upper pole and weighed 250 gm. (Fig. 2). These tumorous masses invoved both the cortex and the pyramids and resembled metastatic sarcoma grossly. The renal pelves were hyperemic and contained purulent material. Histologically, both kidneys showed marked chronic pyelonephritis which was associated with large areas of necrosis and infiltration with plasma cells, lymphocytes and large mononuclear cells with

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Fig. 1—The cortical surfaces of the kidneys showing numerous, white, tumorous masses which have replaced a major portion of the right kidney and the upper pole of the left kidney.



Fig. 2—A close-up view of the cut surface of the left kidney showing the tumorous tissue which extends from the cortex to the pyramid.

eosinophilic and often foamy cytoplasm which contained sudanophilic substance (Fig. 3). Polymorphonuclear leukocytes were also present in scattered areas. The necrosis of tubular epithelium was a prominent feature and the cells showed various stages of degeneration. Many of the degenerating tubular cells revealed vacuolated cytoplasm and had become desquamated into the lumina which were often markedly dilated. It is our feeling that the pseudoxanthoma cells are simply liberated tubular epithelial cells which have taken up their potential phagocytic properties. Occasional multinucleated giant cells were seen along with predominantly mononuclear cell infiltration. The glomeruli showed diffuse hyaline thickening of the basement membrane, and frequently, acellular, hyaline, nodular sclerosis. The afferent arterioles also showed marked hyalinization of the walls. The hyaline substance

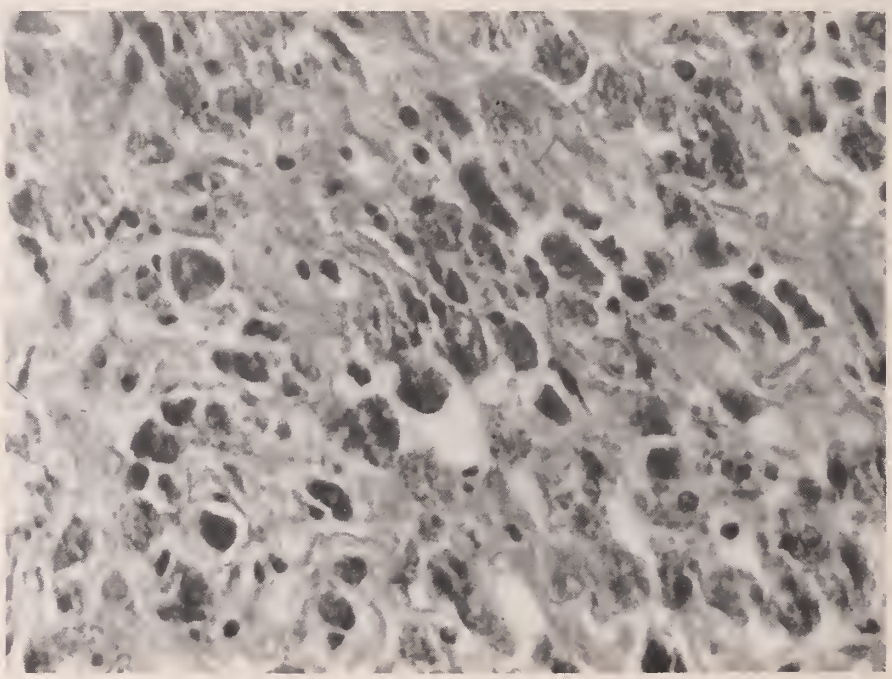


Fig. 3—A photomicrograph of the tumorous portion of the kidney showing numerous, large, mononuclear cells with foamy cytoplasm.

of the glomerular basement membrane and the arterioles was accompanied by distinct basophilia which is in our opinion very characteristic of arteriolosclerosis associated with diabetes mellitus.

Many diabetic patients die as a result of renal disease. The diabetic nephropathy is very often complicated by either acute or chronic pyelonephritis. A special form of acute pyelonephritis known as papillitis necroticans is almost always seen in diabetics. A pyelonephritis with xanthogranulomatous changes and gross resemblance to renal neoplasm has been reported in the literature. Recently, Ghosh reported three cases of chronic pyelonephritis with xanthogranulomatous changes. They were associated with hydronephrosis and renal stones blocking the ureteropelvic junction. The appearance of xanthoma cells has been noted in long standing suppuration of the kidney or pyonephrosis by various observers.

Various microorganisms have been cultured in cases of xanthogranulomatous pyelonephritis and most have been of the Gram negative intestinal group. From two of Ghosh's three cases B. proteus was cultured and she makes the point that B. proteus infection of low virulence may be responsible for the slow appearance and maintenance of granulation tissue in the kidney. In the present case E. coli was isolated in pure culture from the urine. None of the previously reported cases of xanthogranulomatous pyelonephritis was found in diabetic patients, but it may be possible that this disease like papillitis necroticans will prove to occur more frequently in diabetic than nondiabetic patients.

Limitations of Tolbutamide

The release of the new oral diabetic drug tolbutamide (Orinase) for prescription use imposes new responsibilities on the physician and patient, according to an editorial in the June 1st Journal of the American Medical Association.

The drug, which was available only for experimental purposes until recently, is not a substitute for insulin and can be used only in certain types of diabetic patients, the editorial said. Both insulin and tolbutamide help control the amount of sugar in the blood, which is excessive in diabetes mellitus.

Real and serious problems will arise if tolbutamide is dispensed without a prescription and if it is used in patients for whom it "obviously is not indicated." It is most likely to help the diabetic who has a relatively mild case which developed after the age of 30.

It is especially important for the patient not to develop a careless attitude and for him to understand that the use of tolbutamide does not rule out dietary restrictions and other measures necessary to control the disease. Uncooperative patients should not be considered suitable for treatment with tolbutamide.

Much research has been done on tolbutamide; however, more remains, including learning what happens when the drug is administered for many years.

"In the meantime, physicians must warn their patients that this drug is not a true substitute for insulin but in carefully selected patients can be used instead of insulin to control the blood sugar level." "If the patients are not warned properly, if they do not cooperate, or if the prescribers of the drug do not understand its limitations, trouble will inevitably arise."

The editorial also listed some of the restrictions and precautions in the use of tolbutamide.

It cannot be used in patients with juvenile or growth-onset diabetes mellitus; unstable or "brittle" diabetes; a history of diabetic coma; maturity-onset diabetes complicated by severe ketosis, acidosis, coma, severe injury, gangrene, Raynaud's disease, or serious impairment of kidney or thyroid function; malfunctioning or disease of the liver, or diabetes adequately controlled by dietary restriction.

Any physician using tolbutamide should insist that during the initial test period the patient report to him daily and during the first month once weekly for examination. After the first month the patient should be seen at least once a month.

Mental Health . . . .

JOSEPH R. BLALOCK, M.D.

The Manic Patient

The manic phase of the manic depressive phychosis is perhaps the most interesting and not too well understood of the psychiatric reaction types. It comprises about 4% of first admissions to mental hospitals. The symptoms have a special fascination for medical men and students of human behavior because of their very nature and because of their close relationship to the ambitious strivings and frustrating life experiences of the average man.

In an investigation (published in 1936) into the psychology of mental mechanisms and behavior of the manic phase of the manic-depressive reaction the most rational method of approach was felt by the author to be a recording and study of their ideational content, of the facts they presented in their conversation and behavior. The ideas expressed by the manic are a guide to the patient's conflicts. The restraint of the manic is so lifted that one obtains a clear picture of his inner life and conflicts. The answer is provided, indeed offered, to problems that would remain hidden ordinarily.

Two patients were studied and a brief summarizing statement is given concerning each.

Case One: This patient, male, age 43, was a mathematician, who was admitted in a manic attack after having been in a hypomanic state for over one month. During his first 10 days in the hospital he was definitely more overactive, overtalkative and elated. This was followed by a two-week period in which there was a definite break with reality, a break which was varying and was characterized by dramatizations, misidentifications, symbolic behavior and utterances. He then gradually returned to more normal behavior with a brief period in the transition marked by fatigue and general lassitude rather than by a recurrence of his earlier manic symptoms. This improvement was permanent and he left the hospital two months after this return to approximate normalcy. Attention is called to the two stages of his manic reaction of about 40 and 14 days each. This patient was interviewed from admission and his behavior and productions recorded at considerable length. He was cooperative and intelligent, and as he improved, interviews covered on the one hand his restrospective account of his statements and actions, and on the other a detailed life history. Soon after his admission anamneses were taken from his wife, sister, brother, a fellow teacher, and nurse of his childhood. As a result, a fairly complete life history was obtained.

Case Two: This patient, male, age 23, Hebrew, a law student, became mildly depressed in the spring of 1933 and remained variably depressed until July. At this time he developed symptoms leading to an appendectomy. His general picture thereafter changed to one of normal interest, then to excessive interest, activity and elaborate plans for the future. He entered into plans with a friend to open a restaurant, used up his savings, became increasingly overtalkative and insulting, and was admitted to the hospital October 26, 1934. There his overactivity continued, he became more sullen, assaultive, and showed more definite regressive features. In this state his productions revealed particularly well his psychosexual conflicts. He also made statements concerning father, God, power, sun, electricity, emanations and sexuality, which made their psychological meaning in his particular case rather clear.

The ideational content of both patients fell into these groups. 1. Ideas referring to the role of the parents; 2. Ideas referring to psychosexual growth; 3. Remarks concerning environmental objectives; 4. References to psychic traumata; 5. References having to do with death and rebirth; 6. Remarks indicative of symbolism, modern and archaic. Brief comments on each of these six groups of ideas are made.

1. The parents or their surrogates played an unusually large part in the mental content. Neither had satisfactorily emancipated himself from his infantile attitudes toward his parents. The first patient, though in his fifth decade and with average life accomplishments, showed clearly the need in later life that he have paternal and maternal surrogates who were kind. The manic patient assumes and demands from those about him a kindly and tolerant attitude, expecting privileges and reacting to their denial with irritability and hostility. This attitude is analogous to that of a child of five or

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

six toward his parents. In brief, the parents were found to occupy a large portion of the ideational content. These manic patients carried with them a picture of an ideal or kind parents and easily transferred their feelings concerning them toward their surrogates and, in the manic attack proper, to the people in the environment. Their attitude was one of ambivalence, being friendly and contented when their personal demands were granted and being hostile and angry when their demands were refused.

2. The statements of the patients indicated difficulty in their psychosexual development. Writers have stressed the insecurity which manic-depressive patients show as regards their sexual status. The incomplete resolution of the Oedipus conflict in early life, the strong love and hate tendencies, the homosexual compotent and the narcissism and dependence tend to determine later selections of objects of affection and to influence the relationships to other people. One patient expressed fear of harm to the genitals. He wondered whether the cavity resulting from the curettement of a suprapubic cyst might not be analogous to a vagina.

3. The ideational content of these patients referred to external activities, work and plans to a sufficient degree to reveal, on the one hand a difference between their concept of such and the concept of mentally well individuals, and on the other hand the extent to which such factors were involved in their own psychological problems. The infantile roots of the interest of the first patient in mathematics began in his interest in childhood in building blocks and with interest in form and symmetry. In his profession his teaching superiors and the college itself functioned as a kindly but strict parental substitute. Friendships with certain fellow teachers were quite strong, furnishing a socially acceptable outlet for his homosexual tendencies. His attitude toward students was a parental one and he spent a lot of time with coaching backward students. In his psychosis he conceived of himself as having two personalities, A and A-Prime, and expressed the concept of one to one correspondence as applied to the two sexes. The second, and the younger patient, in his psychosis talked much of studying medicine, psychiatry, and law, changing objectives from day to day as he identified himself with those about him.

4. The patients referred again and again to events and life situations which were of a painful nature and which constituted psychic traumata. The prominence of this pointed up the fact that depressive thoughts are just beneath the surface and for a brief period the patient could well be considered in a reactive depression and considered momentarily depressed. The first patient referred to teasings, physical assaults by his brother, inadequacy of his home as a child. The second patient said "I was very badly upset by my sister's death. I can't explain why. I tried laughter. It may have been compensatory laughter." He spoke feelingly of having been a puny child and of recurring otitis media.

5. Ideas were expressed concerning death and rebirth. Those concerning death were more apt to occur in stuporous states associated with depression or temporary depressive states in the manic reactions. The ideas of rebirth seemed to follow the idea of having died, and are apt to be associated with the vague concept of reincarnation, meaning death with a return to life. One patient in a perplexity state expressed ideas of death associated with punishment for past sins. One referred to the continuous tub as a coffin and to being born again as a famous movie actor. Dying probably means to the manic patient the abandoning of an inferior state.

6. Numerous archaic ideas were expressed and dramatized. The first patient dramatized his identification with the cosmos. He took a posture which to him represented a tree; he was erect; the arms were extended horizontally. He said that he was a tree. He acted in accordance with the primitive belief that man's soul after death is buried in the earth, goes into a tree, and that there is in this way a rebirth into nature, a sort of reincarnation. He expressed this idea at the time and in retrospect several weeks later.

The following general conclusions are expressed as applicable to the understanding of the manic reaction in general. The manic phase of the manic-depressive reaction has been the subject of psychological investigation. The objective has been the study of clinical case material in order to describe those psychological mechanisms which were present. This study was preceded by a survey of the literature. In this survey the development of the manic-depressive concept was first traced, and then those contributions which have seemed of merit were reviewed. This review was limited to a consideration of the manic reaction from the standpoint of etiology, symptomatology and psychological mechanisms. The clinical investigation was centered about the ideational content of two representative manic patients. There were found to be indicated in this ideational content a rather limited numbers of topics. The critical observations followed the lead suggested by the general scope of the patients' remarks, and there

were considered, in order, the role of the parents, psychosexual growth, environmental objectives, psychic traumata, ideas of death and rebirth, and symbolism—modern and archaic.

The conclusions which are expressed, it is believed, apply not only to the patients who were studied in this communication but are applicable to the understanding of the manic reaction in general.

1. The manic reaction represents one solution or "way out", in the attempt of the patient to solve his particular problems. The goal seems to be a state of narcissistic satisfaction or happiness in which painful ideas are denied, the inferiorities are compensated for, and the ego is omnipotent.

2. The manic reaction represents a regression to early expressions of narcissism. The symptomatology indicates the degree of regression. The symptomatology contains many references to early childhood forms of thinking, acting and feeling; for example, the patient's attitude towards parents or parental substitutes, and the concentration of interests upon the individual himself with consequent overvaluation of himself. As regression deepens there may be many references to early physical interests such as those related to the oral and anal zones.

3. The attitude towards those in the environment is a selfish one serving in its several aspects the narcissistic needs of the patient. The parents principally, and others also, function as individuals who may or may not gratify the patient's demands and impulses. Ambivalence which is so well developed in the manic reaction is expressed with a kindly feeling when demands are met, and with hostility when the demands are denied.

4. The psychosexual status of the manic patient is made clear in his ideational content and behavior. In general, his original relationships to his parents have been retained and the Oedipus situation is poorly resolved; there is an inadequate heterosexual adjustment which is accompanied by an increased homosexual component, perhaps well sublimated. The bisexual constitution tends to be exaggerated; this is shown during the regression and may at times constitute an important part of the clinical syndrome.

5. It should be emphasized in closing that only psychological mechanisms have been investigated. It is believed that the pathology of the psyche is not the only pathology present in the manic-depressive psychoses. In these comments no attempt is made to correlate or evaluate the psychic factors in their relationship to the physical, hereditary or other aspects.

REFERENCE

Joseph R. Blalock, M.D.: "Psychology of the Manic Phase of the Manic-Depressive Psychosis". Psychiatric Quarterly, X, April 1936.

Allergy to Common Ivies

Two cases of allergy to Algerian ivy, a common house and garden plant, have been reported by a Pasadena, Calif., dermatologist.

Writing in the American Medical Association's May Archives of Dermatology, Dr. Clete S. Dorsey said he knows of no other reported cases of dermatitis from Algerian ivy.

Both patients developed severe, itchy skin eruptions after contacting juice from the stems and leaves of the plant. Touching the unbroken leaves did not produce a reaction.

After recovering from the Algerian ivy dermatitis, both patients became sensitive to the common English ivy, a close relative of Algerian ivy. This suggested that patients who have been sensitized by one of the plants will also be allergic to the other.

Dr. Dorsey said he has a "strong suspicion" that contact dermatitis from the English and Algerian ivy is "not rare," since they are among the most widely cultivated of all plants.

Varients of English ivy grow throughout the United States. Algerian ivy, which has become quite popular in the last 10 years, grows outdoors only in the West Coast states. However, most of the large-leaved variegated house ivies are Algerian ivies and can be found anywhere in the country.

He noted that many plants are called ivies without being related to these "true ivies." For example: Kenilworth ivy, Boston ivy, German ivy (sometimes called Japanese ivy), ground ivy, marine ivy, Cape ivy, poison ivy, or philodendron (a common houseplant).

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Fluoridation of Public Water Supplies*

At the 84th Annual Meeting last November in Atlantic City, the American Public Health Association reaffirmed its declared support for the fluoridation of public water supplies. This was done in reflecting that scientific evidence of the safety and effectiveness of water fluoridation continues to accumulate without supported contradiction.

According to the U.S. Public Health Service, on December 1, 1956, there were 1,437 American communities, serving a total population of more than 30,500,000 persons, receiving fluoridated water. These figures do not include the areas and populations supplied by waters which are naturally fluoridated.

In late November, 1956, it was announced that the House of Delegates of the American Medical Association had authorized its Councils on Pharmacy and Chemistry and on Foods and Nutrition to reexamine all available information on the fluoridation of public water supplies. This was interpreted by some as qualifying the endorsement of fluoridation that had been given by the American Medical Association in 1951. The truth is, however, that in all likelihood this report, to be presented late in 1957, will contain further evidence to reassure the public regarding water fluoridation. Reexamination of evidence is a proper function of every professional and scientific group.

All important societies in the field of public health have endorsed the fluoridation of public water supplies and other agencies such as the National Research Council of the National Academy of Sciences and the American Association for the Advancement of Science have recorded their support.

Throughout the history of public health in the United States the courts have been called on to interpret and to justify the administrative practices formulated to protect the public health. It is not unusual, therefore, that judicial opinion has been sought in regard to regulations calling for the use of fluorides in public water supplies. These rulings are supporting the use of water fluoridation as an important and acceptable public health measure.

Opposition has been raised by religious, pseudoscientific, and political groups as well as by individuals. In some instances well financed national groups have led the opposition. Practically without exception the courts have declared the objections invalid and undue interferences with decisions of high public health import.

James A. Tobey, a student of public health law and the author of some of the few authoritative texts thereon, has recently summarized the present status of court opinion in this field.[1] In the opening paragraph of his survey he states:

"Proper fluoridation of public water supplies does not infringe the constitutional rights of individual citizens. The principle is now well-established in American jurisprudence. Between 1953 and the end of 1955 the Supreme Court of the United States and the courts of last resort in six states have ruled that this procedure is a valid and reasonable exercise of the police power of the state in the interests of the public health, and that it does not violate any of the rights of the individuals vested in them by the Federal and State constitutions." In Shreveport an injunction against fluoridation was later reversed by the Supreme Court of the State of Louisiana.

Tobey points out that the courts have made it clear that fluoridation is of great importance and benefit to all citizens; that "such a measure was not arbitrary or unreasonable, not medication, not adulteration, not class legislation, and not in violation of any constitutional privilege, including religious freedom." He adds that:

Whenever the exercise, or alleged exercise, of the vested right of religious freedom has come in conflict with public health laws and procedures, which likewise have a solid constitutional basis, it is the public health which invariably has prevailed, and in the nature of things must always prevail. Fluoridation of municipal water supplies not only is now an accepted and established scientific procedure, but it is sanctioned by the law of the land."

In Virginia there are 51 communities using artificially fluoridated water:

*Two Editorials which appeared in the American Journal of Public Health and The Nation's Health are the basis of this article.

Alexandria	Newport News
Alexandria Park	Norfolk
Annandale	Norfolk County (Part)
Arlington	Occoquan
Belle Haven	Phoebus
Blair Addition	Port Lock
Bristol	Portsmouth
Chatham	Pulaski
Churchland	Richmond (City)
Craddock	Roanoke
Danville	Roanoke County (Part)
Deep Creek	Rocky Mount
Fairfax County (Part)	Simonsdale
Falls Church	South Boston
Farmville	South Norfolk
Fredericksburg	Springfield
Fries	State Colony
Hampton	Suffolk
Harrisonburg	Virginia Beach
Henrico County (Part)	Warwick
Hilton	Waynesboro
Hopewell	West Norfolk
Lakeside	Winchester
Lincolnia	Woodbridge
Lynchburg	York County (Part)
Madison Heights	

Areas having naturally fluoridated water are:

Chesterfield County	Nansemond County
Isle of Wight County	Norfolk County (Part)
Prince George County	Surry County
Princess Anne County	Sussex County
Southampton County	

There are two areas in the State which initiated fluoridation of public water supplies and later ceased. There are two areas that had the matter under consideration and did not accept fluoridation of the public water supplies.

References

American Journal of Public Health and The Nation's Health Vol. 46, No. 12, p. 1577.

American Journal of Public Health and The Nation's Health Vol. 47, No. 2, p. 215.

1. Tobey, James A.: Fluoridation and the Courts, Public Works (June), 1956, p. 92.

Monthly Report of
Bureau of Communicable Disease

	May 1957	May 1956	Jan.-May 1957	Jan.-May 1956
Brucellosis	4	2	10	7
Diphtheria	1	4	5	21
Hepatitis	39	44	229	253
Measles	843	5976	3426	18845
Meningococcal Infections	3	10	34	46
Meningitis (Other)	15	9	76	50
Poliomyelitis	2	1	13	6
Rabies (In Animals)	37	21	150	180
Rocky Mt. Spotted Fever	1	1	2	5
Streptococcal Infections	572	510	3769	3228
Tularemia	2	1	17	6
Typhoid Fever	3	7	16	14

Heart Disease

Disorders of the heart, blood vessels and related organs caused over 850,000 deaths last year—more than half the total number of deaths in this country, Health Information Foundation reports.

Although heart and circulatory disorders cause more deaths than all other diseases combined, great progress has been made against certain forms of heart disease. Thanks to new methods of fighting rheumatic fever and rheumatic heart disease, for example, the number of heart disease deaths among children 1-14 has decreased by 95 per cent since 1900.

Heart disease is apparently more prevalent among women than men, Health Information Foundation points out—but it causes 75 per cent more deaths among the males in this country. One possible explanation of the excess male mortality: Men are thought to be particularly subject and vulnerable to the strains and pressures of modern life.

Since 1900 heart disease has become more than ever a disease of middle and old age. Today about 70 per cent of all deaths from this disease take place at ages 65 and over, and another 25 per cent between the ages of 45 and 64.

Current Currents

SPECIAL REPORT ON ACTIONS OF THE HOUSE OF DELEGATES OF THE AMA

THE PRESIDENT-ELECT of the American Medical Association is Dr. Gunnar Gundersen, La Crosse, Wisconsin. A member of the AMA Board of Trustees since 1948 and Chairman for the past two years, Dr. Gunderson will become President of the AMA during the June, 1958, meeting in San Francisco. He will succeed Dr. David B. Allman, Atlantic City, New Jersey, who became the 111th President during the recent meeting in New York.

SOCIAL SECURITY FOR PHYSICIANS was handed another setback when two resolutions favoring compulsory inclusion of physicians in the Federal Social Security system and another calling for a nationwide referendum of AMA members on the issue were rejected by the House. Delegates reaffirmed their opposition to compulsory coverage of physicians under the Old Age and Survivors Insurance provisions of the Social Security Act. They also recommended a strongly stepped up informational program of education which will reach every member of the Association, explaining the reasons underlying the position of the House. At the same time, the House reaffirmed its support of the Jenkins-Keogh Bills.

A NEW STATEMENT ON MEDICAL SCHOOLS was adopted to replace the "Essentials of an Acceptable Medical School", initially approved by the House of Delegates in 1910 and most recently revised in 1951. The new statement, entitled "Functions and Structure of a Modern Medical School", was adopted after a year of careful study by the Council on Medical Education and Hospitals in collaboration with the Association of American Medical Colleges.

The statement provides flexible guides which will "assist in attaining medical education of ever higher standards" and "serve as general but not specific criteria in the medical school accreditation program." The document encourages soundly conceived experimentations in medical education, and it discourages excessive concern with standardization.

THE MEDICARE PROGRAM was the subject of three resolutions adopted by the House. One resolution condemned any payments under the program "to or on behalf of any resident, fellow, intern or other house officer in similar status who is participating in a training program." It was declared that Government sanction of such payments would give impetus to improper corporate practice of medicine by hospitals or other non-medical bodies. The House added that such proposals would violate traditional patterns of American medical practices, seriously aggravate problems of hospital-physician relationships, encourage charges by hospitals for residents' services to patients not under the Medicare program, and create additional problems in such areas as medical licensure and health insurance.

In another action on Medicare, the House recommended that the decision on type of contract and whether or not a fee schedule is included in future contract negotiations should be left to individual state determination. The House restated the AMA contention that: the Dependent Medical Care Act as enacted by Congress does not require fixed fee schedules; the establishment of such schedules would be more expensive than permitting physicians to charge their normal fees, and fixed fee schedules would ultimately disrupt the economics of medical practice.

The House suggested that AMA attempt to have existing Medicare regulations amended to incorporate the Association's policy that the practice of anesthesiology, pathology, radiology and physical medicine constitute the practice of medicine, and that fees for services by physicians in these specialties should be paid to the physician rendering the services.

THE BASIC ISSUE OF THIRD-PARTY INTERVENTIONS, as it affects the patient's free choice of physician and the method of remuneration, came in for serious consideration. The result was the adoption of "Suggested Guides to Relationships Between State and County Medical Societies and the United Mine Workers of America Welfare and Retirement Fund". The following "General Guides" are included:

1. All persons, including the beneficiaries of a third-party medical program such as the UMWA Fund, should have available to them good medical care and should be free to select their own physicians from among those willing and able to render such service.

2. Free choice of physician and hospital by the patient should be preserved: (a) Every physician duly licensed by the state to practice medicine and surgery should be assumed at the outset to be competent in the field in which he claims to be, unless considered otherwise by his peers. (b) A physician should accept only such terms or conditions for dispensing his services as will insure his free and complete exercise of independent medical judgment and skill, insure the quality of medical care, and avoid the exploitation of his services for financial profit. (c) The medical profession does not concede to a third-party such as the UMWA Welfare and Retirement Fund in a medical care program the prerogative of passing judgment on the treatment rendered by physicians including the necessity of hospitalization, length of stay, and the like.

3. A fee-for-service method of payment for physicians should be maintained except under unusual circumstances. These unusual circumstances shall be determined to exist only after a conference of the liaison committee and representatives of the Fund.

4. The qualifications of physicians to be on the hospital staff and membership on the hospital staffs is to be determined solely by local hospital staffs and by local governing boards of hospitals.

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This summary covers only a few of the important subjects considered by the AMA House of Delegates. The items were selected because of their unusual interest.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

The Cost of Above Average Hospital Utilization

The following projections are based on the 1956 experience of Virginia Hospital Service Association, the Blue Cross Plan with headquarters in Richmond, and on the weighted-average 1956 experience of all 86 Blue Cross Plans which serve the country. The Virginia Plan which was used as "guinea-pig" in this study serves 82 of Virginia's 130 cities and counties; its experience, therefore, can be considered to reflect fairly accurately the customs and influence of medical practice throughout the State.

During 1956 this Virginia Plan had an average of 391,000 members (412,000 at present), of whom 58,300 were hospitalized in Virginia; it paid an average of $129.43 for each of these hospital cases, at the average rate of $17.12 per hospital day.

Comparing the experience of the Virginia Plan with that of all Plans throughout the country:

A. *In-Patient Admission Rate*

Virginia ___149 admissions per 1000 members
National Average
135 admissions per 1000 members
*Difference _ 14 admissions per 1000 members
*14 X 391 thousand members =
5474 admissions involved
5474 X $129.43 per case = $707,691.82

Thus, last year Virginia's above-average admissions cost the Blue Cross Plan about $700,000.

B. *Average Length of Hospital Stay*

Virginia _____7.56 days per case
National Average _____7.45 days per case
*Difference _____0.11 days per case
*0.11 X 58,300 cases = 6413 days involved
6413 X $17.12 per day = $109,790.56

Thus, last year Virginia's longer-than-average hospital stays cost the Blue Cross Plan about $100,000.

Above-average utilization during 1956, accordingly, dissipated about $800,000 of the pre-paid funds held in trust by the Virginia Plan. Had this expense not been incurred, the Plan could have reduced its charge for family coverage by 10%.

A decrease in local hospital utilization to the national average level of utilization would, through its financial effect, offset the increase in hospital operating costs that the Plan anticipates, 1958 over 1957. However, if 1956 utilization rates continue, the Plan must increase its charges to Subscribers next year.

During 1954, an increase in the Plan's charges to Subscribers was directly responsible for cancellation of 7,000 Blue Cross-Blue Shield Contracts, covering 15,000 persons. Not all, perhaps, but at least 75% of these persons dropped their Blue Cross-Blue Shield membership because they could no longer afford it. Thus:

11,000 persons became potential "free" hospital patients,

11,000 persons became potential voters for "socialized medicine", and the medical profession of Virginia lost 11,000 paying patients.

What will happen in '58?

* * * * *

The divergence of the Virginia Plan's experience from the national experience has come about during the past ten years; ten years ago this Plan was "average". Other statistics explain the divergence: the Virginia Plan experienced a 100% increase in the number of medical admissions per 1000 members during the ten year period—when the surgical admission ratio increased less than 5% and the obstetrical admission ratio, though rising and falling in reflection of the post-war "baby boom", stayed

relatively constant. Today, just as many Blue Cross-Blue Shield members enter the hospital for medical care as are admitted for surgical procedures.

Obviously, the increase in medical admissions does not mean that Virginians have become "sicklier". The increase has been a function of several factors—the aging of our population, for one thing; for another, the advances in medical science which have made the hospital the best, and in many cases the only, place to treat effectively certain disease conditions. Comparing the local Plan's experience with national experience, however, indicates that one of the factors underlying the local increase in medical admissions is a tendency for members to enter a hospital when hospitalization is not needed; that is, when ambulatory or home care would be adequate —albeit less convenient, perhaps.

In this regard some physicians have asked, "Why does Blue Cross-Blue Shield keep worrying about utilization? Why investigate individual cases? Why not just pay up whenever somebody goes to the hospital the way insurance companies do—no questions asked—and charge enough to cover the expense?"

Commercial insurance carriers, like Blue Cross-Blue Shield, must raise their charges to cover the cost of the increasing frequency of hospitalization, just as manufacturers must raise the prices of their products to cover increases in the cost of labor and raw materials. The officers of some of the health insurance companies are expressing concern over the necessity of doing so. In some instances insurance companies are using "deductibles" and "co-insurance"—ineffectual and inequitable controls at best —which do not ameliorate the underlying causes of the situation. Because of their particular interests, however, the insurance companies have not yet been able to incorporate pertinent restrictive provisions in their policies in order to relieve physicians from the entire onus of staying the current trend of health insurance abuse.

Throughout the country the Boards of Directors of Blue Cross-Blue Shield Plans, especially the physicians serving on these Boards, believe that the continuance of American medicine as we still know it today is becoming increasingly dependent upon more judicious use of health insurance—to use the term broadly. That part of the nation's health-care budget which is being expended through insurance channels is increasing rapidly, percentage-wise and in actual dollar-amounts; if our free-enterprise system of medicine is to continue there must be control over wastage of those dollar-amounts. Accordingly, all Blue Cross-Blue Shield Contracts have a provision which, in effect, stipulates that members are not permitted to waste their prepayments; it states that costly in-hospital services are not to be paid for whenever less expensive out-patient services would be satisfactorily adequate.

This provision is a help to those many physicians who, looking to the future, are worried about current trends. They recognize that, in the hands of a patient, a carte-blanche regarding hospitalization is as potentially dangerous as a signed but otherwise blank prescription-form would be. As are all physicians, they are subject to the "pressures" of patients who—for financial reasons, for convenience, or for other non-medical reasons known only to themselves —"demand" hospitalization; and they appreciate the opportunity to say, "All right, but I don't know whether or not your Blue Cross-Blue Shield will cover it".

Fortunately, the majority of physicians in Virginia, by action as well as statement, indicate that they sincerely appreciate the efforts Blue Cross-Blue Shield is making to preserve our free-enterprise, fee-for-service medical care system; they apparently consider it a professional responsibility to cooperate with those efforts. Unfortunately, however, there must be a few physicians in Virginia who somehow have lost sight of the "big picture" and have inadvertently permitted, or abetted, certain individual patients to use community-prepaid funds injudiciously. Projecting statewide the one local Plan's 1956 experience indicates that such inadvertence last year cost Virginians about a million dollars.

Editorial . . . .

The Barber-Surgeon's Sign

LAST FALL when the Historical Section of the Richmond Academy of Medicine was asked to arrange exhibits depicting various phases of early seventeenth century medicine as a part of the Jamestown Festival, the question naturally arose as to what the practice of medicine was like 350 years ago.

Remarkably little detailed information has come down to us regarding early medicine in Virginia. Seventeenth century physicians, in common with other Virginians of that era, were essentally doers and not recorders.

This meant that those who arranged the exhibit had to seek information from distant sources in order to reconstruct what probably took place here in Virginia. Fortunately, a query was directed to The Wellcome Historical Medical Museum in London. An immediate reply was received from the Curator, Dr. E. Ashworth Underwood, who forwarded a number of English medical illustrations of the period. One photograph especially, caught the eye of the committee. This was a signboard of an English apothecary or barber-surgeon, dated 1623. It was decided that this should serve as the central motif of the exhibit. The date was perfect and the Henry the



Eighth-like-figure appeared to personify the flamboyant era that the committee was trying to recapture.

Signs of this period were designed to catch the eye and tell a story that the illiterate could not fail to grasp. The wood carver who fashioned this sign left nothing to chance. The sturdy figure of the surgeon, whose name does not appear on the sign, stands in the center flanked by marble pillars, which evidently represented the entrance to his shop. Behind him are rows of jars and bottles. Surrounding him are seven panels which depict various activities in his busy practice. The lowest compartment on the left shows him pulling a tooth. Immediately above, he is busily engaged in sawing off the left leg of a man, who closely resembles the surgeon. The patient, who appears unperturbed, steadies the leg at the knee, while the operator grasps the foot firmly and saws away. The empty shoe may be seen on the floor.

The next panel shows a venesection. A stream of blood spurts into a basin held by the composed patient, while she grasps with the other hand, a staff to distend the veins of the arm. The upper central compartment depicts the physician examining a flask of urine in the bed room of an elderly woman. The bed has elaborate draperies and carving and suggests that he also caters to the carriage trade. The next panel lends itself to various interpretations. One school of thought believes that he is reducing a dislocated shoulder but a simpler expanation is that the physicians is palpating the brachial pulse in the upper arm, while he lays a hand on the brow of a feverish patient.

The woman in the sixth square has a large tumor of the right breast, which the surgeon is preparing to cauterize. In the seventh and final section, the versatile physician shows he is also familiar with traumatic surgery. A cavalier, with sword, whose gait is somewhat uncertain, holds up an injured member for the inspection of the surgeon who steadies him with his left arm.

After viewing these lively scenes in which the barber-surgeon is always the central and heroic figure, one is hardly prepared for the inscription below, which reads simply—"The All Highest has created medicine (from the beginning) and a wise man will not abhor it. In the year of Our Lord 1623."

Immediate steps were taken to have a sponge rubber impression made in England so a replica could be cast in this country for display in the medical exhibit. Then came the payoff. Our correspondent wrote that it would be difficult to have a cast made, for the original sign was destroyed when the Headquarters of the Royal College of Surgeons was burned during the air raids of 1940. The same raid, which destroyed the sign, wiped out most of John Hunter's original specimens. In the words of Dr. Underwood. "No one could have foreseen the disaster which befell the collection during that raid. It was a piece of sheer bad luck that one small bomb happened to penetrate the underground tunnels where the bulk of the specimens had been stored for safety and the inflammable preservatives and the resulting fire did the rest." Only a charred fragment of sign bearing the inscription remains.

This posed a fresh problem, which happily was met by the timely intervention of Mr. Harold Midgeley of Richmond, England, who was in charge of the British exhibits at the Jamestown Festival. Mr. Midgeley, through friends in London, has arranged for a replica of the sign, based on available photographs and descriptions, to be made for the Richmond Academy of Medicine. This should arrive the latter part of June and will be given the place of honor in the current-exhibit. The cost is being borne by the Life Insurance Company of Virginia, at the suggestion of Dr. Ennion S. Williams, Medical Director, who interested his associates in underwriting what in all probability wll become the only replica extant of this reminder of a picturesque period in English medicine.

H.J.W.

Society Proceedings....

Warwick-Newport News Medical Society.

The regular meeting of this Society was held in the Coca-Cola Building, Newport News, on May 14th, under the presidency of Dr. F. S. Beazlie, Jr. Mr. V. T. Strickler, Hampton, discussed Business Expense Insurance. There was a panel discussion on "Cholesterol in Vascular Disease" which highlighted points brought out at the American College of Physicians meeting recently held in Boston. The panel was formed by Drs. E. L. Alexander, William Read, Robert Peirce, Thomas Hunnicutt, and M. L. Binder.

The Williamsburg-James City Medical Society

Held its regular meeting on May 7th. Cocktails were served at the home of Dr. Barrett, followed by dinner at the Eastern State Hospital. Dr. Elam C. Toone, Richmond, was the guest speaker, his subject being Disseminating Lupus Erythematosus.

Alexandria Medical Society.

Dr. Eugene Grether is the new president of this Society, succeeding Dr. H. Haskins Ferrell. Dr. James M. Moss has been elected president-elect: Dr. C. Albert Hudson, vice-president; Dr. William J. Weaver, treasurer; and Dr. H. Glenn Thompson, secretary. Two new members of the executive committee are Drs. Ferrell and Alvin C. Wyman.

Halifax County Society.

At the annual meeting of this Society, Dr. William G. Puryear, South Boston, was elected president, and Dr. Warren C. Hagood, Clover, secretary.

Norfolk County Medical Society.

At the meeting of this Society on May 20th, Dr. Kenneth W. Warren, staff surgeon of the Lahey Clinic, Boston, was guest speaker. His subject was Surgical Management of Common and Uncommon Lesions of the Biliary Tract.

Alleghany-Bath Medical Society.

At the regular monthly meeting of this Society on May 29th, Dr. Julian Beck, Charlottesville, spoke on Electrolites and Cardiac Conditions.

Dr. Donald Myers, Hot Springs, is president and Dr. R. P. Hawkins, Jr., Clifton Forge, secretary.

The Hampton Roads Orthopedic Society

Met on May 13th at the home of Dr. and Mrs. A. A. Kirk, Portsmouth. Dr. F. A. Carmines presented a case of subastragalar pain following a fracture of the neck of the talus with gradual adduction deformity. Dr. H. M. Kunkle presented a case that had been receiving cortisone derivatives and antituberculous treatment and had gotten worse. She developed a draining hip. TBC was cultured and a hip fusion done. Dr. Kirk presented follow-up of a traumatic epiphysitis of the lower dorsal spine in a fourteen year old girl. He also presented the case of dysplasia of the glenoid in a fifty-seven year old male.

Virginia Academy of General Practice.

Dr. Malcolm H. Harris, West Point, succeeded Dr. Frank E. Tappan, Berryville, to the presidency of the Academy at its annual meeting in Roanoke, May 24-26. Other officers elected are: vice-president, Dr. Fletcher J. Wright, Jr., Petersburg; secretary, Dr. Russell G. McAllister, Richmond (re-elected); and treasurer, Dr. William A. Young, Richmond (re-elected).

Jamestown Festival Medical Exhibit

An interesting exhibit on Medicine at Jamestown is housed in the Richmond Academy of Medicine Building at 1200 East Clay Street, Richmond. The exhibit is open from 10:00 A.M. to 2:00 P.M., Monday through Friday, and from 10:00 A.M. to 1:00 P.M. on Saturday. Our readers should not miss this exhibit when you are in Richmond.

News Notes . . . .

New Members.

Since the list published in the June issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

David Ware Branch, M.D., Roanoke
Christopher Malcolm Gedda Buttery, M.D., Roanoke
Joseph Warren Camp, M.D., Dunbar
John Hugh Frierson, Jr., M.D., South Boston
Randolph McCutcheon, Jr., M.D., Richmond
William Rankin Nelson, M.D., Richmond
Seymour Paul Weissman, M.D., Portsmouth
Daniel Coyle Wilkerson, M.D., Bedford

Dr. Bell Honored.

Dr. Baxter I. Bell, Williamsburg, was honored recently at a public reception for his forty years of community service. Hundreds of people paid tribute and presented gifts, which included a watch, a silver service and an air-conditioning unit. Dr. Bell came to Williamsburg in 1917 and in 1926 he opened the first private hospital there.

Virginia Heart Association.

At the recent meeting of this Association, Dr. George S. Grier, III, Newport News, was named president-elect. Dr. Margaret Glendy, Roanoke, was elected vice-president and Dr. S. K. Ames, Cape Charles, was elected to the Board of Directors.

Dr. C. W. Trexler,

Honolulu, Hawaii, has been elected first vice-president of the Pacific Coast Oto-Ophthalmological Society. This is the second largest specialty society in the United States. He has also been named president of the Reserve Officers of Naval Services in Honolulu.

Dr. Trexler is a graduate of the University of Virginia in 1926.

International Congress of Internal Medicine.

For the first time, the International Congress of Internal Medicine will be held in the New World in 1958. This will be at the Sheraton Hotel, Philadelphia, April 24-26, 1958. At this Congress it is planned, through lectures and panels, to analyze medical achievements of world-wide significance, to evaluate certain apparent problems and to chart courses of action designed to enhance technical knowledge and to aid in the continuing war against disease. At the same time, the plan includes such social and cultural activities as will tend to promote cooperation, friendship and mutual understanding among physicians and peace among their countries.

The 1957 Annual Session of the American College of Physicians will occur in Atlantic City, April 28 to May 2, immediately following the Philadelphia Congress.

Dr. T. Grier Miller, Philadelphia, is president of the Congress, and Mr. Edward R. Loveland is secretary-general.

Dr. Hugh H. Trout, Jr.,

Roanoke, has been named general vice chairman of the Central YMCA completion fund campaign.

Dr. William A. Johns,

Richmond, spoke to the Northampton-Accomack Memorial Hospital Staff on June 5th, his subject being Malignant Melanoma. This lecture was given under the Continuation Education Program of the Hospital.

The World Congress of Gastroenterology

And the 59th Annual Meeting of the American Gastroenterological Association will be held at the Sheraton-Park Hotel, Washington, D. C., May 25-31, 1958. The objective of this Congress is to bring together scientists from all parts of the globe, who are actively contributing new knowledge and experience in the fundamental sciences or in the clinical behavior patterns related to disorders of the alimentary tract.

Further details of the Congress, information about hotel reservations, fees, presentation of papers, etc., may be secured from Dr. H. M. Pollard, secretary-general, University Hospital, Ann Arbor, Michigan.

Dr. Charles J. Frankel, Jr.,

Charlottesville, received a bachelor of laws degree from the University of Virginia at its commencement exercises in June. He is associate professor of orthopedic surgery at the University and has been working on his law degree for five years.

Dr. Charles L. Savage,

Waynesboro, has been elected president of the Valley Mental Health Center.

Pan-Pacific Surgical Association.

The Seventh Congress of this Association will be held in Honolulu, Hawaii, November 14-22, 1957. All members of the profession are cordially invited to attend and are urged to make arrangements as soon as possible if they wish to be assured of ade-

quate facilities. An outstanding scientific program by leading surgeons with sessions in all divisions of surgery and related fields promises to be of interest to all doctors.

Further information and brochures may be obtained by writing to Dr. F. J. Pinkerton, Director General of the Pan-Pacific Surgical Association, Room 230, Young Building, Honolulu, Hawaii.

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For further details, contact Dr. R. S. LeGarde, Director, Orange County Health Department, Orange, Va. (*Adv.*)

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Radiologist to practice with a private group in a group of privately owned hospitals. If interested in this position, write #175, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Association Wanted.

Otolaryngologist, 35, family, University trained, Board eligible August 1957, seeks association with individual or group in location near University. Available September 1957. Write to "Otolaryngologist", care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

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Two full time general practitioners or psychiatrists to work on psychiatric service of 2000-bed hospital, in medical and cultural locality. Full-time salary range $6,000 to $10,320 (plus 25% for certification) with retirement, insurance, leave and other government benefits. Citizenship and license by some state required. Contact Manager, VA Hospital, Roanoke 17, Va. (*Adv.*)

Wanted.

A second-hand microscope for a first year medical student. Contact Dr. L. P. Hyde. 506 N. Jefferson Avenue, Pulaski, Va. (*Adv.*)

Obituaries . . . .

Dr. William Harrison Higgins,

Prominent Richmond physician, died June 8th. He was seventy-three years of age and a graduate of Johns Hopkins University School of Medicine in 1908. Dr. Higgins had practiced in Richmond for forty-four years before retiring last summer. For many years he was professor of clinical medicine at the Medical College of Virginia and was a former chairman of the Richmond Board of Health. Dr. Higgins was a past president of the Richmond Academy of Medicine and the Richmond Heart Association. He had been a member of The Medical Society of Virginia for forty-four years.

His wife, two daughters and two sons survive him. One son is Dr. William H. Higgins, Jr., who was in practice with his father.

Dr. Cecil Edward Martin,

Well-known physician of Emporia, died May

25th. He was a native of North Carolina and seventy-seven years of age. Dr. Martin graduated from the Medical College of Virginia in 1909 and had practiced medicine at Emporia for forty-six years. He had been an active member of The Medical Society of Virginia since 1910 and had served as a member of the Council for a number of years.

Three daughters survive him.

Dr. Frederick Lionel Finch,

Richmond, died in Portsmouth on May 21st. He was serving as chief of the x-ray department at the Norfolk Naval Shipyard. Dr. Finch was fifty-one years of age and a graduate of the Medical College of Virginia in 1932. He practiced medicine in Richmond for some years but had recently been at the U. S. Naval Shipyard in San Francisco and in Portsmouth. Dr. Finch was a retired Naval Commander. He had been a member of The Medical Society of Virginia since 1934.

His wife and a daughter survive him.

Dr. Willis Christopher Yeatts,

Danville, died May 30th at the age of eighty-six. He was a graduate of the Medical College of Virginia. Dr. Yeatts first practiced in Pittsylvania County and then for two years in Maryland before locating in Danville in 1907. He was a Life Member of The Medical Society of Virginia..

His wife and seven children survive him. A son is Dr. Harry B. Yeatts, now of Buenos Aires, Argentina.

Dr. Bryce.

Dr. Edwin C. Bryce was born in Fredericksburg, October 20, 1884. About two years later, his family moved to Richmond where he spent the remainder of his life. He received his early education in the public schools of Chesterfield County and Richmond. He later graduated from the University College of Medicine, Pharmacy School, and after practicing this profession for a short time entered the Medical School of the same institution from which he graduated in 1910.

After graduation he practiced general medicine in Manchester, Virginia, (later South Richmond) for seven years, subsequently entering Brooklyn Eye, Ear, Nose and Throat Hospital to train as a specialist in this field. He returned to Richmond in 1919 to practice this specialty which he did until several months before his death.

In his personal and professional life, Dr. Bryce was outstanding, his friends were numberless and his standing in his profession of the very highest caliber. He has left a place in his community that will never be filled. His devotion to duty, his love of his fellow man and his very attractive personality could hardly be matched.

WHEREAS, Almighty God has seen fit to take from our midst our friend and colleague, Dr. Edwin C. Bryce, on April 15, 1957, and whereas, the members of the Richmond Academy of Medicine are deeply grieved at his passing and acknowledge the loss of a wise counsellor,

BE IT, THEREFORE, RESOLVED, that the Richmond Academy of Medicine record in its minutes our sorrow at the passing of Dr. Bryce and that a copy of this resolution be entered in the minutes of the Society, a copy forwarded to the family of the deceased and a copy sent to The Medical Society of Virginia.

PHILIP JONES, M.D., *Chairman*
R. C. SIERSEMA, M.D.
T. B. WASHINGTON, M.D.

Dr. Kelleher.

Dr. Lawrence B. Kelleher, the son of Lawrence J. and Mary McDonnell Kelleher, was born in Richmond, January 27, 1903.

His early schooling began in the Cathedral School and Benedictine High School. He attended Belmont College in Belmont, N. C. and the University of Richmond. On completion of his premedical education, he matriculated at the Medical College of Virginia, where he was graduated in 1926 with the degree of Doctor of Medicine.

After graduation, he served his internship at St. Vincent DePaul Hospital in Norfolk, Virginia. It was here he met and married Miss Martha Hewitt, and unto this marriage four daughters were born.

The following year he opened his office for General Practice in Charlotte, N. C. and was also appointed Physician for the newly opened Ford Plant there.

Five years later he returned to Richmond, where he practiced until his passing. Rapidly he gained a host of friends and patients—loved and respected by all.

Dr. Kelleher was appointed Physician to the State Penitentiary, serving until 1942. He was Doctor to the State Commission of Boxing and Wrestling. During World War II he spent each Wednesday examining inductees at the Induction Center.

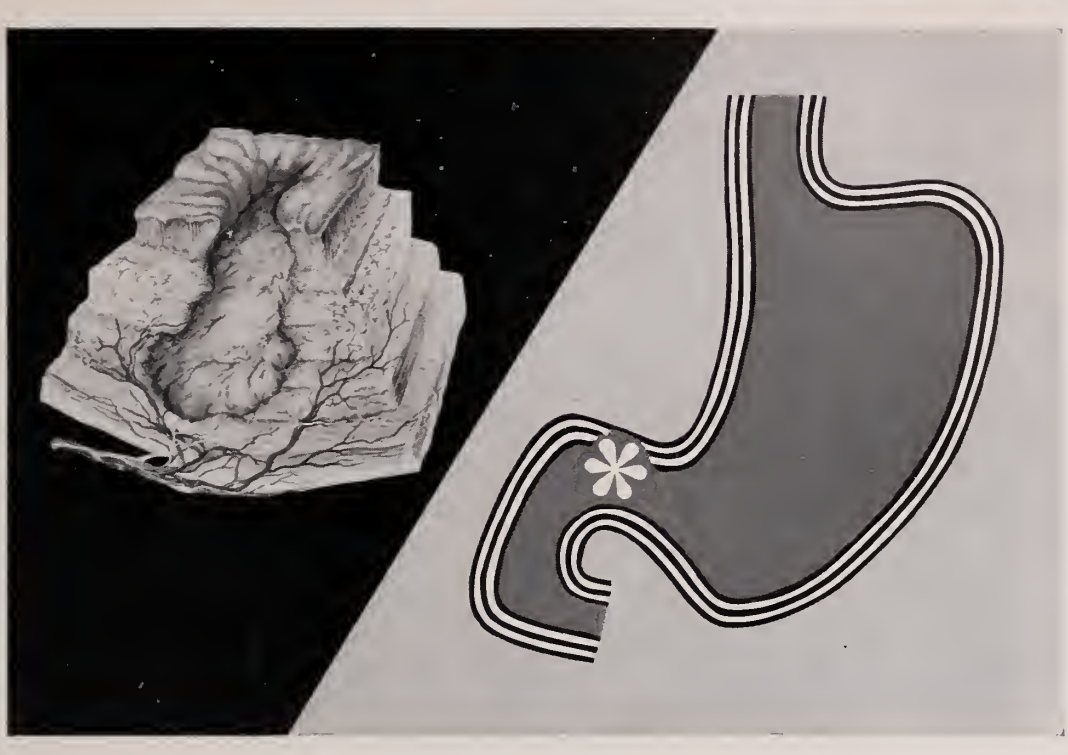
As a member of the Knights of Columbus, Lawrence Kelleher proved himself to be a leader of men, with a magnetic personality and a strong character. As a member of St. Benedict's Catholic Church, his fellow members found him to be a courteous gentleman, intelligent and witty. Enduring his own ailments with great patience, he was ever mindful of the sufferings of others. Freely giving of his time, sympathetic understanding, and medical knowledge to the poverty stricken brought to his attention in the Sheltering Arms Hospital, Bureau of Catholic Charities and like social organizations. Because of his simplicity, sincerity and good naturedness, he was able to claim the friendship of Ecclesiastical dignitaries, members of the profession and ordinary rank and file of society.

Dr. Kelleher passed away March 30, 1957. A great praise for him is the tribute of tears devoted to his memory by the many men, women and children of all faiths, testifying to his kindness of heart as St. Benedict's Catholic Church quickly filled for his funeral services.

BE IT RESOLVED that a copy of this resolution be spread upon the minutes of this Academy and a copy be sent to the daughters of Dr. Kelleher.

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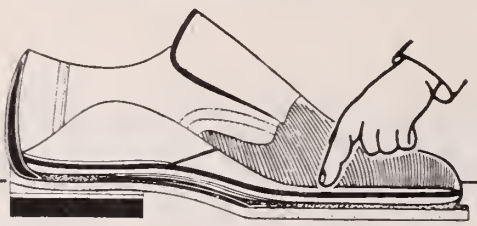
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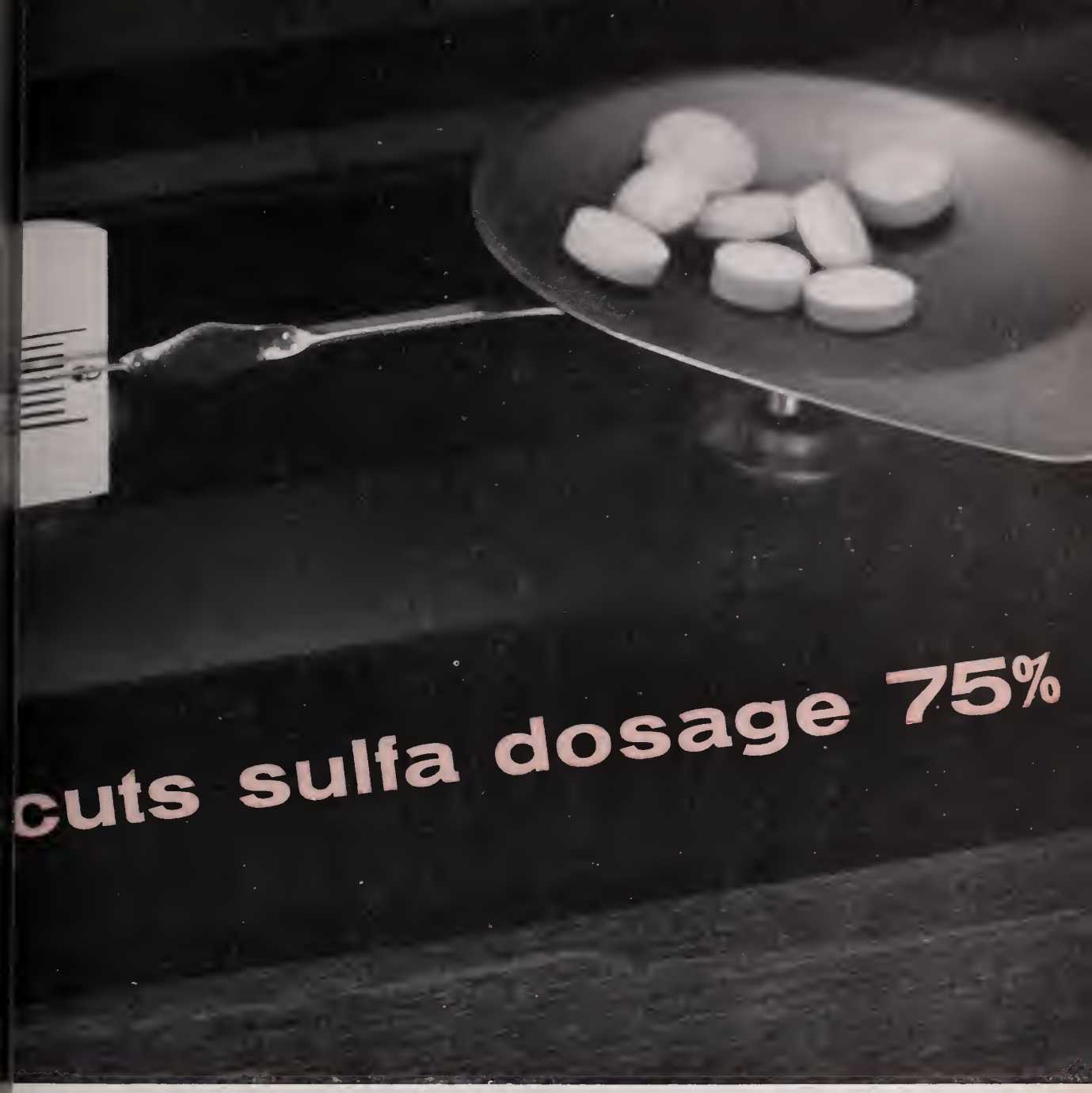
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1. Boger, W. P.; Strickland, C. S. and Gylfe, J. M.: Antibiot. Med. & Clin. Ther. 3:378 (Nov.) 1956.

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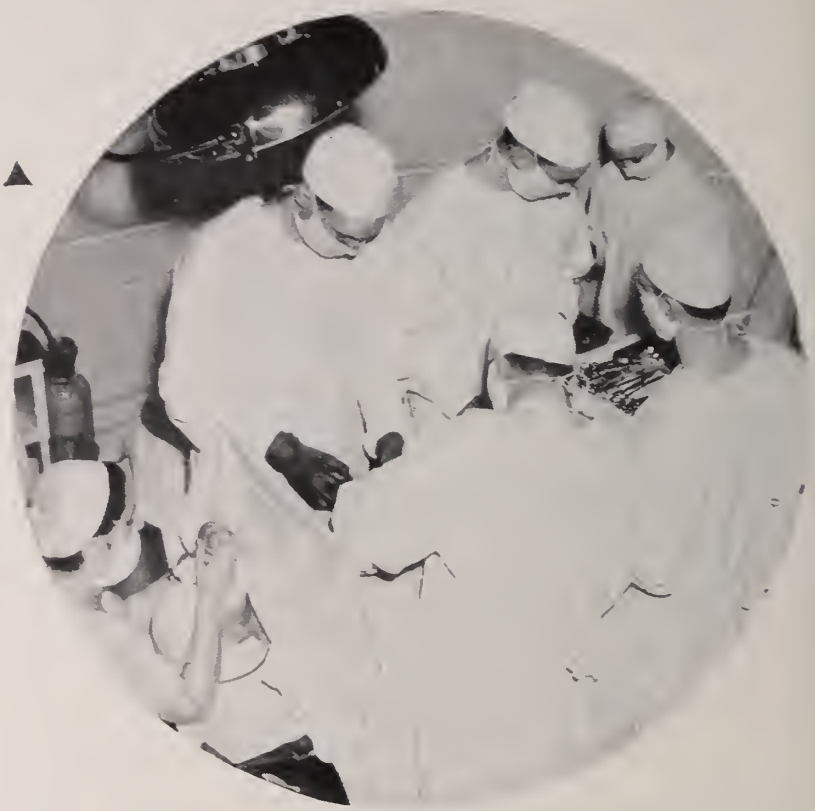
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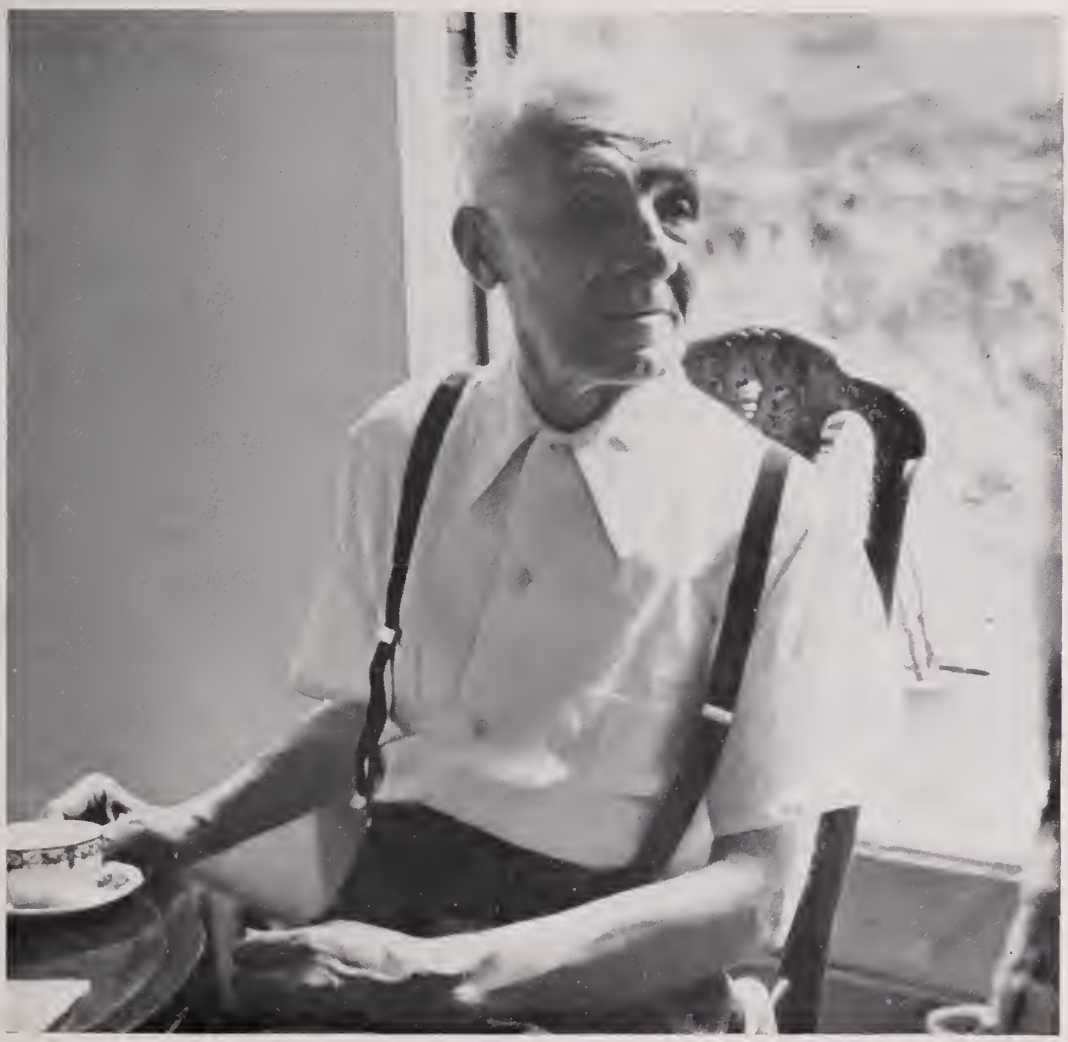
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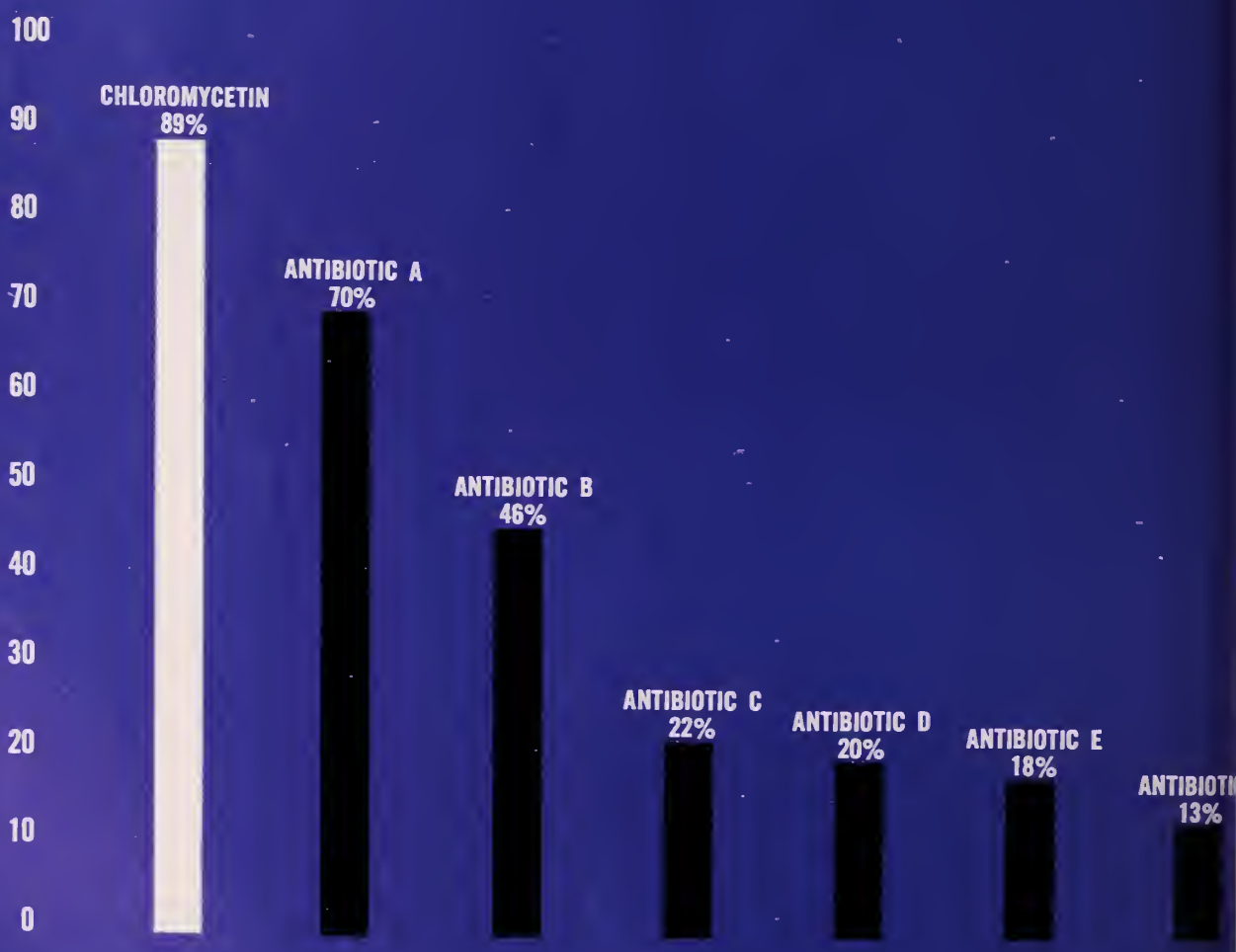
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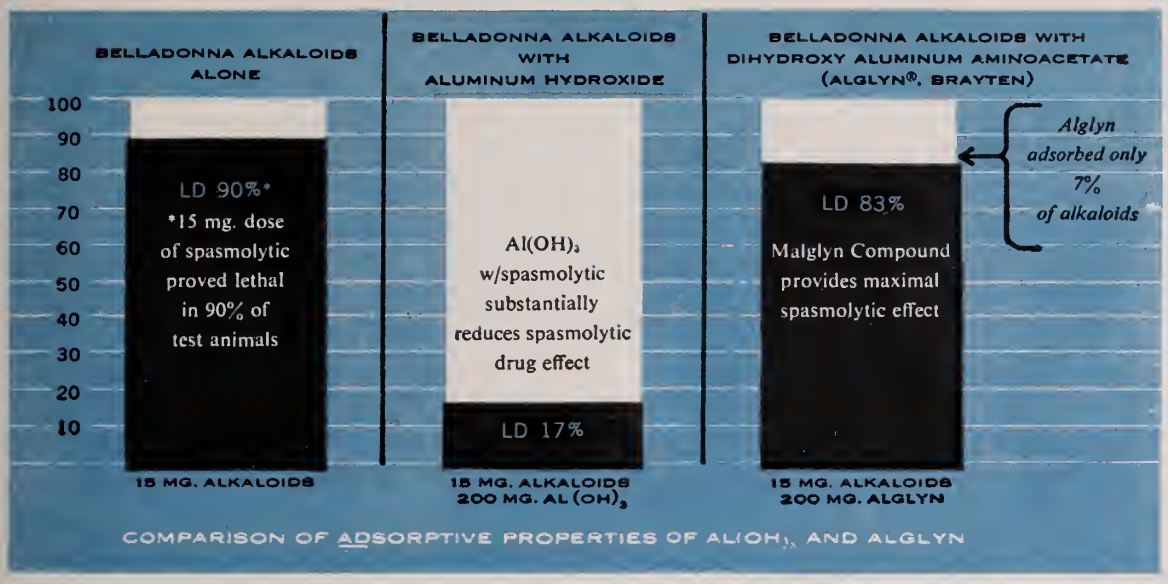
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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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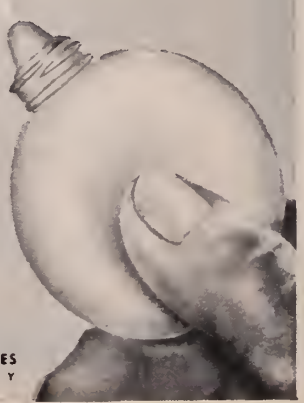
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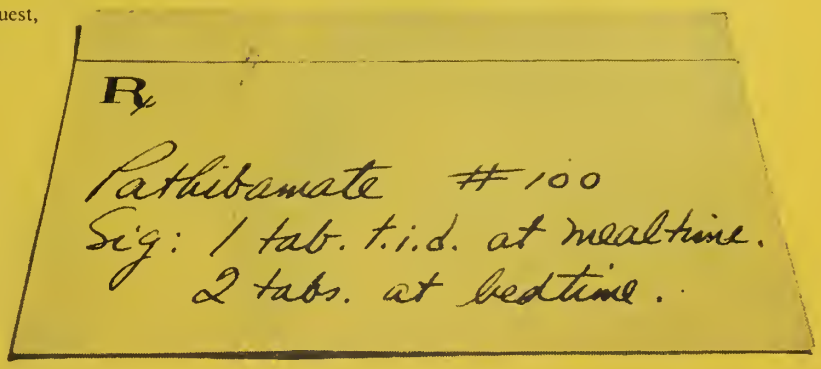
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ferences: 1. Borrus, J. C.: *M. Clin. North America,* ress, 1957. 2. Gillette, H. E.: *Internat. Rec. Med. & G. P.* 1. 169:453, 1956. 3. Pennington, V. M.: *J.A.M.A.,* ress, 1957. 4. Cayer, D.: Prolonged Anticholinergic rapy of Duodenal Ulcer. Am. J. Dig. Dis. 1:301-309 y) 1956. 5. McGlone, F. B.: Personal Communication to erle Laboratories. 6. Texter, E. C., Jr.: Personal mmunication to Lederle Laboratories. 7. Bauer, H. G. McGavack, T. H.: Personal Communication ederle Laboratories.

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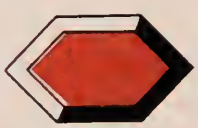
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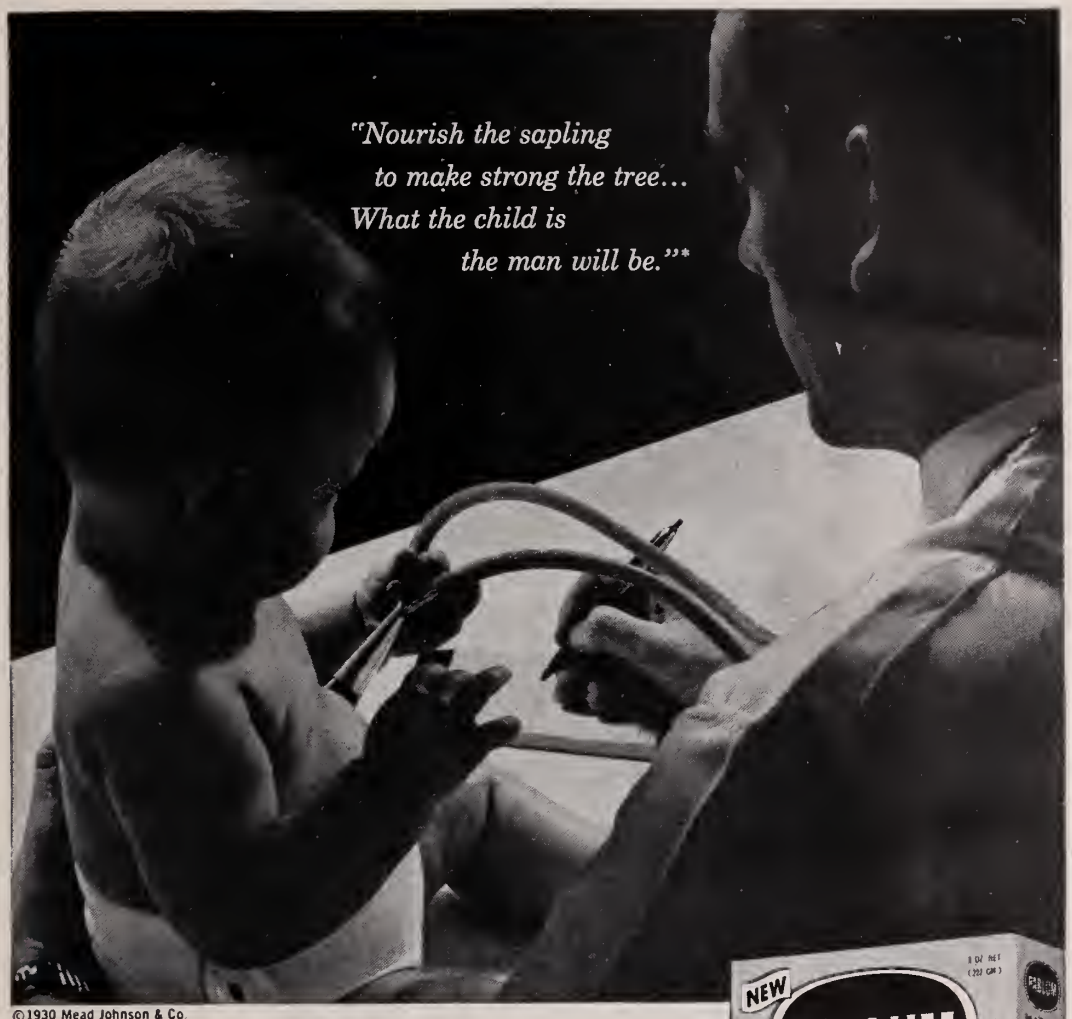




References: 1. Communication to Abbott Laboratories, 1956. 2. Moyer, J. H. et al: Deserpidine for the Treatment of Hypertension, Southern Medical J., 50:499, April, 1957.

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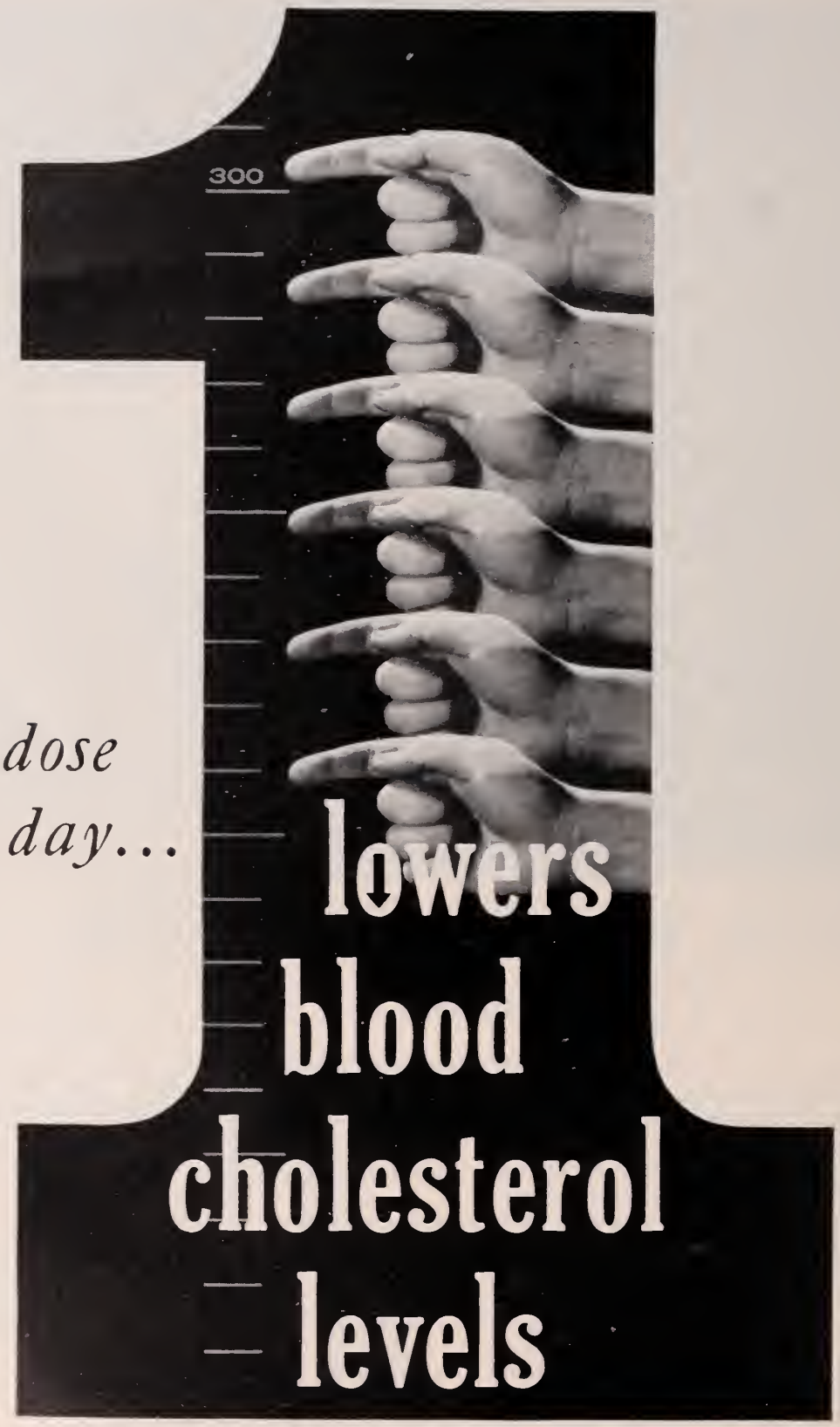
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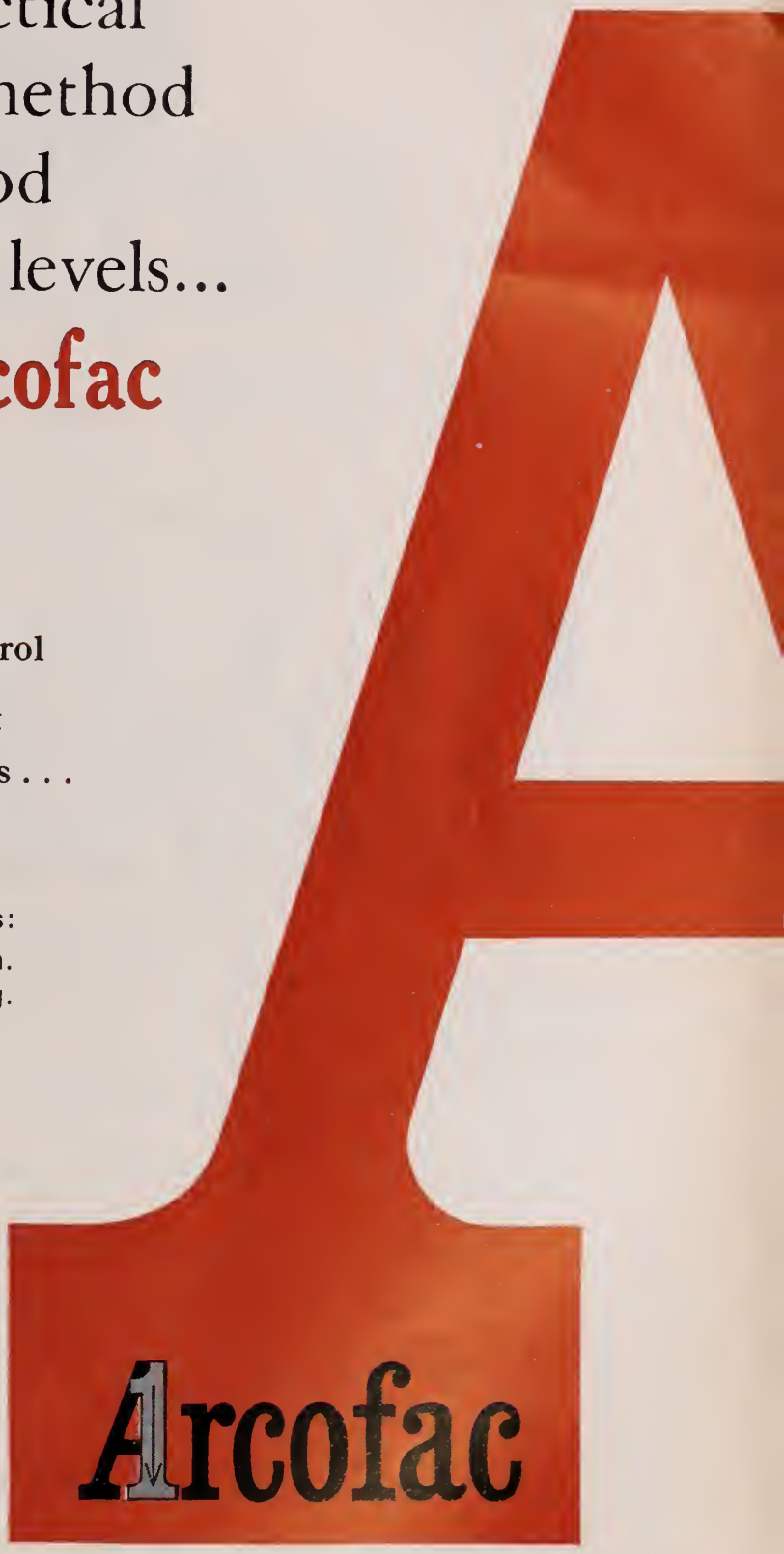
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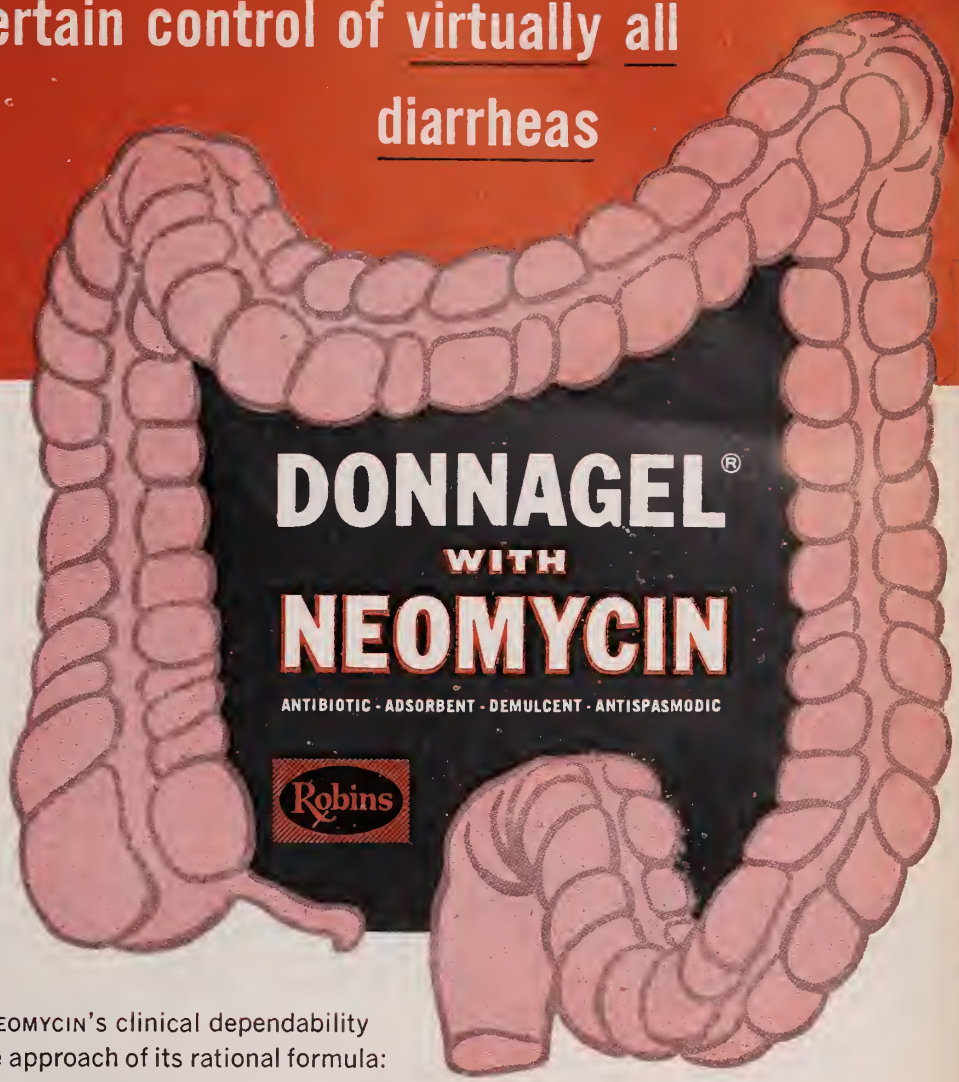
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*Ferguson, J. T., and Linn, F. V. Z.: Antibiotic Med. & Clin. Therapy *3*:329, 1956.

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Guest Editorial . . . .

Gallstones and Heart Disease

THE CLINICAL ASSOCIATION of gallstones and heart disease still furnishes a stimulating topic for differences of opinion. John Hunter's own physician, Edward Jenner, is said to have been interested in the role of gallstones in producing or exaggerating anginal pain, and many elaborate articles dealing with this problem have been published during the last fifty years. In spite of this, much uncertainty remains, and patients are often allowed to continue to carry gallstones that are doing them harm. Fear of the risk of surgery, in the presence of a heart that is not normal, is often the deciding factor, but there are other factors. Our general subject involves three problems—(1) that of mimicry, leading to mistaken diagnosis of heart disease, (2) that of coexistence and the matter of trying to determine how much of the clinical picture is due to gallstones and how much to heart disease, and (3) the study of clinical and experimental evidence in regard to whether or not gallbladder disease may make worse existing coronary disease.

Biliary tract pain and cardiac pain may each take rather bizarre patterns. Space does not permit going into details of the pathways involved. The clinician must surely think of the biliary tract as a possible source of thoracic pain if he is to avoid diagnostic error.

Coexistence of gallstones and heart disease is certainly more than mere chance. Large series of autopsies indicate that gallbladder disease is twice as common in patients with coronary disease. The physician is often faced with a difficult task in trying to determine how much of the picture is due to each factor. A very reasonable objection to our general thesis is the well-known fact that gallstones are commoner in women and coronary disease is commoner in men. However, for some unknown reason, the severe forms of gallbladder disease tend to occur in males.

Improved experimental methods have been developed that demonstrate, in dogs, the effects of distention of the gallbladder (or common duct) on coronary flow and on the electrocardiographic tracing. These effects may be prevented by atropine. Ample

clinical studies are available to confirm these observations. In general the effects are far more evident in patients with abnormal hearts (or dogs whose hearts have been made abnormal by ligation of small coronary branches or by sclerosing injections). The addition of spasm to organic diminution of coronary channels may lessen coronary flow quite as effectively as progression of the organic changes.

No less an authority than Paul D. White agrees that "a troublesome gallbladder . . . may seriously disturb cardiac function in the presence of otherwise silent coronary disease." It is obvious that operating on a patient with severe coronary disease, in the mistaken impression that one is dealing with acute intraabdominal pathology, may be disastrous. It is less obvious, but none the less true, that withholding operation for gallstones in the presence of heart disease may be very harmful, indeed, to the patient.

With good anesthesia and good surgery, cholecystectomy in these cases carries a very low risk—less than the hazard of continued medical treatment. The results justify more frequent resort to surgery in patients with coronary disease who also harbor gallstones.

Howard A. Patterson, M.D.

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Let's Reminisce!

In an article on Cancer from a Clinical Point of View, Professor v. Nussbaum (Munchner Arztl, Int. Bl. No. 10, 1875) stated that "Cancer is a growth of the epithelium that spreads rapidly and supplants the stroma of connective tissue, by slight causes goes into ulceration, as a local trouble, produces general sickness by bleeding and decomposition, and finally, particles are carried through the circulation into different organs, producing in them the same growth and organic process, ending now in death. As causes of cancer, may be cited old age, chagrin, and great mental anxiety; further, all structures incongruous to epithelium and connective tissue predispose to cancer—warts, scars, chronic swollen glands, etc. . . . Cancer is not born with the individual, and is not contagious. . . . *Cancer is radically curable by early and sufficiently extended operation.* . . . Medicines often aid, especially after scooping out the cancer. Among the most valuable are iodine, arsenic and cundurango. (Virginia Medical Monthly, June 1875)

Combined Antihistamine-Ascorbic Acid-Bioflavinoid Therapy in Urticaria and Related Dermatoses

A Preliminary Report

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THE BENEFICIAL EFFECT of the antihistaminic drugs in the therapy of urticaria and related dermatoses is now well established. However, individual response to these drugs is variable and a favorable response cannot be expected in all cases. An attempt has been made to enhance the effectiveness of this therapy by (1) proper selection of the antihistaminic preparation and dosage for the individual patient and (2) addition of certain drugs which help to restore normal capillary permeability.

SELECTION OF APPROPRIATE ANTIHISTAMINIC DRUG

Pharmacologically, the antihistaminic drugs can be divided into four general groups; ethylenediamine, ethanolamine, monamine and unclassified[1]. Lewis[2] pointed out that individual response to the various histamine antagonists is variable and suggests that when one preparation fails it should be withdrawn in favor of another. When changing from one preparation to another it is wise to select one from a different pharmacologic group than the original. The following case history illustrates this principle.

Case—S. T. B., a 52-year-old white truckdriver sustained a compound, comminuted fracture of the left ulnar and radius in an accident on November 22, 1951, and received large doses of penicillin following reduction of the fractures. About 10 days after penicillin therapy was instituted he developed a generalized urticarial reaction. Penicillin was discontinued but the urticaria persisted in spite of therapy prescribed by various physicians over the next ten months. He had received Benadryl but this had been discontinued because of drowsiness and nausea. Pyribenzamine had been of no apparent benefit. He was first seen by us on September 15, 1952, because of persistent urticaria. Chlortrimeton and phenagan were given trial runs but were of no avail. Perazil, on the other hand, offered more thorough but not complete relief in doses of 200 mgm. daily. Numerous other antihistaminic preparations were given clinical trial one after the other but Perazil was the most effective. Other measures used empirically during the course of the eruption included steroid therapy, autohemotherapy, Staphylococcus Toxoid injections, intravenous nicotinamide and oral dexadrine, but none showed any apparent benefit. In May 1954, he was started on ascorbic acid 250 mgm. twice daily and continued on Perazil and there was complete alleviation of symptoms on this combined therapy.

RESTORATION OF NORMAL CAPILLARY INTEGRITY

Numerous attempts to supplement antihistaminic therapy with other drugs which affect the urticarial response have been made. Recently Dobes[3] reported on the apparent beneficial effects of calcium gluconolactobionate combined with antihistamine. Since increased permeability of the capillaries is known to play an important role in the urticarial reaction it was considered worthwhile to study the possible value of high doses of ascorbic acid and a bioflavinoid, Quercetin, in conjunction with antihistaminics in the treatment of urticaria and certain related conditions. The importance of ascorbic acid in helping to maintain normal capillary integrity and permeability has been well established. In more recent years a considerable amount of evidence has accumulated indicating that the bioflavinoids (vitamin P substances) also are involved in maintaining the capillaries in a normal state. Quercetin was chosen for this study because it is a pure substance and

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The authors wish to acknowledge the aid of Dr. J. H. Forbes, Department of Biochemistry, in the preparation of this report.

is apparently more active than the parent substance, rutin[4], from which it is prepared by removal of the carbohydrate side-chain. Leake[5] has advocated the use of ascorbic acid in the treatment of drug allergies. He suggested that a relative lack of this vitamin might make cell membranes more vulnerable to contact with provocative allergens, or that deficiency might result in more immediate release of histamine than that occurring in adequately nourished individuals. On the basis of these hypotheses, 63 private patients were given ascorbic acid 250 mgm. and quercetin 60 mgm. twice daily in combination with antihistaminic therapy.* Perazil was the preparation prescribed for most patients (45 patients). The remaining patients (18) received either Chlortrimeton, Clistin or Benadryl.

RESULTS AND CONCLUSIONS

The results of antihistamine-ascorbic acid-quercetin therapy are listed in table 1. No attempt is made to draw statistical conclusions since the number of patients is small, the disease processes represented are variable in their clinical course and other unknown factors may have been present that affected the course of the disease in individual cases. As would be normally expected, patients with acute urticaria and erythema multiforme showed a favorable response but our impression was that this combined therapy brought about a quicker resolution of lesions than one would expect from antihistamines alone. The results in chronic urticaria were quite impressive since experience has shown that patients with this disease often may be vexing therapeutic problems. Of the eighteen patients with chronic urticaria, thirteen obtained immediate marked relief and five were moderately benefited. It had been hoped that patients with troublesome "id" eruptions would be benefited but the results in this small series were disappointing. No toxic or adverse reactions attributable to the quercetin-ascorbic acid preparation were noted in any of the patients in this group.

*Hasatin-C tablets containing 250 mgm. of ascorbic acid and 60 mgm. of quercetin were made available through the courtesy of the Charles C. Haskell & Co., Inc., Richmond, Virginia.

SUMMARY

Effective antihistamine therapy depends to some extent on the selection of the proper preparation for the individual patient. When one preparation fails it should be replaced by another preparation, preferably selected from a different pharmacological group than the original.

Clinically, the benefit of antihistaminic drug therapy appears to be enhanced by the use of certain drugs which help restore normal capillary integrity, such as ascorbic acid and the bioflavinoids.

Sixty-three patients with urticaria and certain related dermatoses were treated with a combination of antihistamine, ascorbic acid and a bioflavinoid, quercetin, and are reported.

No toxic or adverse reactions attributable to the quercetin-ascorbic acid preparation were noted.

The results in the treatment of patients with chronic urticaria were quite encouraging and warrant further clinical trial.

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Table 1

Diagnosis	Number of Cases	Complete or Marked Relief	Moderate Relief	No Relief	Not Followed
Acute Urticaria	12	7	3	1	1
Erythema Multiforme	4	4	.....	.....	.....
Chronic Urticaria	18	13	5	.....	.....
Infectious Eczematoid Dermatitis with Id	10	1	2	6	1
Atopic or Generalized Dermatitis	6	.....	3	2	1
Nummular or Localized Neurodermatitis	5	1	2	1	1
Pruritus Ani	3	.....	2	.....	1
Pruritus Heimalis	2	1	1	.....	.....
Acute Contact Dermatitis	2	.....	1	.....	1
Stasis Dermatitis	1	1	.....	.....	.....
	63	28	19	10	6

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Salk Vaccine in Major Outbreaks

Salk vaccine should be used even during a major outbreak of polio, since its possible benefits are greater than its possible dangers, according to the Chicago Board of Health. Dr. Herman Bundesen based this statement on experience gained during the 1956 outbreak of polio in Chicago. Evidence from an extensive study of the Chicago experience "reinforces" previous findings about the efficiency of the vaccine as a protection against polio.

His preliminary report appears in the April 27th Journal of the American Medical Association. Cooperating were Dr. Harald M. Graning, regional medical director of the U.S. Public Health Service; Dr. Erwin L. Goldberg, chief medical officer of the Chicago Board of Health, and Frank C. Bauer, A.B., biostatistician and chief of public health methods of the Chicago board.

In the 1,111 cases of polio reported in Chicago in 1956, 841 persons developed paralytic polio. Of these 841 persons, 285 did receive some Salk vaccine. However, 200 had received only one inoculation, 85 had received but two inoculations, and none had received the recommended full course of three doses. Twenty-four of the 285 did not get vaccine until they were actually developing polio. Of the 36 persons who died, eight had received some Salk vaccine. Six had received only one shot and the other two had had only two shots.

The report explained that there have been reservations about using vaccine during epidemic or near-epidemic situations because of the possibility of provoking paralysis at the site of inoculation in persons who contract the disease. Investigation was made on 375 persons who received vaccine and who also contracted the disease during the first nine months of 1956. Of these, 279, or 74 per cent, developed paralysis during the acute stage of the illness. Site of the inoculation was known in 218 cases. Careful study showed "clearly" that prior inoculation did not influence the site of subsequent paralysis.

"Only time will tell" whether the vaccine administered during the outbreak had an effect on reducing the number of cases that would ordinarily have occurred after the peak of the outbreak. However, they have assumed that the vaccine when given in the three properly spaced inoculations was at least partly responsible for limiting the spread of the outbreak. The incidence of polio was much less in those areas of the city where a high proportion of persons had received the three recommended shots than in the areas where persons had received none or only one or two.

When it became clear that there was a major outbreak occurring in Chicago, the board of health and allied groups set up a program of inoculating as many persons as possible within the affected areas. Among the lessons learned, which could be applied to any outbreak of a communicable disease, were these:

If the inoculations are continued after the outbreak ends, with the intention of giving the full course of three shots before the beginning of the following year's outbreak, the city would probably have a higher immunity level and should be better prepared to face a similar situation.

Each case should be reported as soon as the diagnosis is made, using the date of onset of disease instead of the date of report, to determine better the trend of the outbreak.

Information concerning socioeconomic status, race, and age of patients should be collected as a guide for directing preventive efforts to the most susceptible groups.

The diagnosis of each case should be checked 30, 60, and 90 days after the case is reported. A check on the 418 cases reported as nonparalytic in 1956 showed the "startling fact" that after the original diagnosis was made and the acute stage was over, paralysis appeared in 148 persons.

Screening for Hypertension

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IN RECENT YEARS hypertension has fallen from the lofty state of a "disease entity" to the more lowly place of a "physical sign that may or may not indicate a pathological process"[1]. Pickering[2] has speeded this fall by describing hypertension as merely one end of the distribution curve of observed blood pressures. This view will particularly attract physicians, who need patience and perseverance in using the available hypotensive drugs. Furthermore, untreated essential hypertension has an average course of twenty years[3], and hypotensive drugs have not yet been proved to prolong this course in asymptomatic patients.

There are serious arguments against this laissez faire view of hypertension. Whether or not it is a "disease", hypertension is certainly accompanied by a rise in mortality. This rise in mortality is related to the degree of elevation of the blood pressure[4]. There is evidence also that the raised arterial pressure, and nothing but this high pressure, causes the changes that lead to final disability and death in the hypertensive patient[5].

Patients with conditions other than hypertension cannot be clearly set aside from the "normal" population, although these conditions are usually regarded as pathologic. When tested for diabetes mellitus, for instance, many persons have blood sugar values between those classified as normal and those arbitrarily grouped as abnormal. A similar situation is found in testing for anemia, when some results are classified neither normal nor definitely abnormal. A vague separation of normal and abnormal values is, therefore, not an argument against classifying essential hypertension as pathologic nor a valid reason for ignoring the asymptomatic case, provided that treatment can be shown to help the patient.

In the United States, high blood pressure causes progressively more disability after middle life[6]. Pickering suggests that when some specific cause raises arterial pressure for a sufficiently long period, the pressure may remain high when the original cause is removed. Possibly, therefore, early discovery and treatment will benefit the asymptomatic patient when more is known of the etiology of "essential" hypertension and when effective treatment is available.

At least 5 per cent of persons have blood pressure values above the commonly quoted upper limits of normal, and many are not under medical supervision. The control of this increasing medical and public health problem may require not only treating asymptomatic patients when they visit their doctors but also actively searching for them. Screening the population for high blood pressure may be based on the same rationale that now causes miniature radiography units actively to search for early tuberculosis.

This paper will discuss some clinical difficulties in screening for hypertension and will attempt to define the place of screening in controlling the problem of hypertension. It will also present the results of screening for high blood presssure in Baltimore, Maryland.

DEFINITIONS

Essential hypertension is a sustained, abnormally high systolic or diastolic blood pressure or both, when all disorders known capable of causing secondary hypertension are absent. Ninety-five per cent of hypertensive patients visiting the doctor's surgery have essential hypertension[7].

Physicians widely accept the view that early pulmonary tuberculosis is asymptomatic and that the "early" symptoms of phthisis, in fact, indicate advanced disease. Miniature radiography has been used on a mass scale to detect the presymptomatic case. The miniature film is termed a screening test; this procedure sorts out persons who probably have abnormalities from those who probably do not.

Likewise, most clinicians agree that essential hypertension has no specific symptoms. The symptomatic patient consults his doctor usually when hypertension has existed long enough to cause the complications of advanced disease.

THE SCREENING TEST

A screening test must be simple, rapid, and as accurate as possible. The greater the error of the

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The opinions contained in this paper are the private ones of the writer and are not to be construed as reflecting the views of the United States Navy.

test, the larger the number of hypertensive persons classified as "normal" (the false negatives) and of healthy persons classified as "hypertensive" (the false positives).

In screening for hypertension, blood pressure values are chosen as screening levels above which the screenees are referred for further examination. When the test for hypertension is inaccurate, the screening level must be high to avoid too many false positive results. Raising the screening level, however, causes more hypertensives to be missed. These factors must be considered in selecting the test and its screening level.

The test best suited to screen for hypertension is measuring the blood pressure with a sphygmomanometer. Indeed, the family physician uses the blood pressure level as his main criterion for diagnosis. The higher the subject's blood pressure, the more likely is his physician to diagnose hypertension. However, individual sphygmomanometric readings may be expected to have a mean error of ± 8 mm. Hg.[8] The Baltimore screening levels therefore were higher than those which physicians often use as the lower limits of normal.

The studies of Master, Garfield and Walters[9] in the United States and of Hamilton and associates[10] in Britain suggest that the upper limits of "normal" pressure increase with age. It seems reasonable, therefore, to use higher screening levels for older age groups. Based on the figures of Master and associates (1952), the Baltimore screening levels were:

150/90 for persons under 35 years.
160/96 for those 35 through 49 years.
170/100 for those 50 years or older.

These values were used for both sexes, although average values differ for men and women[9,10]. The same levels were used for obese subjects, although fat arms give readings higher than the true blood pressures[11].

Either arm was used, since readings from the two arms do not differ consistently. The blood pressure was read when the screenee had been reclining for three or four minutes. Each person had been in the clinic about 20 minutes and had become accustomed to his new surroundings. The point of complete cessation of the sound was used as the index of diastolic pressure, in accordance with the recommendations of the Committee to Revise Standardization of High Blood Pressure Readings[8]. Only mercury sphygmomanometers were used.

The individual was referred to his personal physician when both systolic and diastolic pressures were above the screening levels. The screenee was also referred when the systolic pressure alone was high and was 20 mm. Hg. or more above the screening level, or when the diastolic pressure alone was 10 mm. Hg. or more above the screening level.

SCREENING RESULTS

The screening program in Baltimore tested 2,021 persons for high blood pressure and for a number of other conditions. The program has been more fully described elsewhere[12]. The persons tested were 17 years or older, and were part of a sample population under study for disease prevalence. When previously interviewed at home, most persons reported that they were healthy or that they had only minor ailments. A small number reported more serious conditions.

The clinic staff asked each person if he had high blood pressure or if he were under medical care for this condition. Screenees replying affirmatively to either question were not referred when the test was positive. This procedure reduced as much as possible the referral of patients whose hypertension was already known to their physicians. Table 1 shows that the test classified as abnormal 150 persons, of whom 83 were already aware of the condition.

To obtain the follow-up results, the staff got in touch with the remaining 67 persons. Forty-one had visited their doctors, from whom the staff obtained reports of the diagnostic results. Thirty-one of the 41 screenees visiting their physicians were confirmed to have hypertension. However, the physicians already knew of most cases; only 11 new cases were confirmed. The physicians had apparently not informed the remaining 20 patients of the condition.

Effects of Age and Sex. In general, the proportion of positive screenees increased with age, even although screening levels were higher for older age groups. More women than men aged 45 years or older were positive screenees. Other studies confirm that middle-aged and elderly women have higher blood pressures than men of the same ages[9,10].

Effects of Race. Table 2 shows the results by race and sex. Positive results are significantly greater in non-white men and women than in similar white groups. The blood pressure findings confirm the clinical impression that hypertension is more prevalent in Negroes than in whites in the United States.

TABLE 1

Results of Screening for Hypertension and of Follow-up with the Physician, by Age and Sex of Persons Screened

Screening and Follow-up Results	Total[1]	Men, by Age in Years					Women, by Age in Years				
		Total[2]	<30	30-44	45-64	65+	Total[2]	<30	30-44	45-64	65+
Number screened	2021	923	173	404	287	57	1095	255	432	313	74
Positive	150	66	2	22	36	6	84	1	16	49	16
Hypertension unknown to screenee	67	32	1	13	15	3	35	0	9	20	5
Follow-up with MD completed	41	20	0	9	9	2	21	0	6	12	3
Hypertension confirmed	31	13	0	6	6	1	18	0	4	11	3
Previously unknown to MD	11	5	0	3	2	0	6	0	2	3	1
Rate per 1000 persons screened											
Number screened	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Positive	74	71	12	4	12	105	77	4	37	156	216
Hypertension unknown to screenee	33	35	6		52	53	32	0	14	38	41
Follow-up with MD completed	20	22	0	[illegible]	31	35	19	0	14	38	41
Hypertension confirmed	15	14	0	[illegible]	[illegible]	18	16	0	9	35	41
Previously unknown to MD	5	5	0			0	6	0	5	10	14

[1]Includes unknown age and sex.
[2]Includes unknown age.

TABLE 2

Results of Screening for Hypertension, by Race and Sex of Persons Screened

Screening Result	Total[1] Persons Screened	White			Non-White		
		Both Sexes	Men	Women	Both Sexes	Men	Women
Total persons screened	2021	1569	735	834	432	177	255
Rate per 1000 persons screened							
Total persons screened	1000	1000	1000	1000	1000	1000	1000
Negative	926	941	942	940	873	876	871
Positive	74	59	58	60	127	124	129

[1]Includes 20 persons of unknown race or sex.

BLOOD PRESSURE AND OBESITY

The height and weight of each screenee were measured. When the weight was 30 per cent or more above the central figure in the Metropolitan Life Insurance Tables [13,14] the screenee was classified as "severely obese".

Table 3 shows the blood pressure results obtained from obese persons. The numbers were too small to give significant findings in persons under 30 years and in those 65 years and older. "Severely obese" persons in the middle age groups had much higher pressures than those without severe obesity. Other reports confirm that hypertension is more prevalent in obese subjects[15].

TABLE 3

Comparison of Obesity and Blood Pressure Results, by Age and Sex of Persons Screened

Degree of Obesity, by Blood Pressure Result	Both Sexes, by Age in Years					All Ages	
	Total[1]	<30	30-44	45-64	65+	Men[2]	Women[2]
Total screened	2018	438	834	600	131	921	1095
Percentage with abnormal B.P.	7.4	0 7	4.4	14.2	16.8	7 1	7.7
Not severely obese	1726	410	722	472	107	799	925
Percentage with abnormal B.P.	5.8	0 7	2.8	11.7	18 7	5 9	5.8
Severely obese	292	28	112	128	24	122	170
Percentage with abnormal B.P.	16.8	0 0	15 2	23.4	8.9	15 6	17 6

[1]Includes unknown age and sex. [2]Includes unknown age.
Note: Only those who took both tests are tabulated.

CONCLUSIONS AND SUMMARY

Screening programs for hypertension may provide epidemiologic data which help determine the etiology of essential hypertension and thus may assist in the final control of this condition. However, early treatment of hypertension has not yet been shown to be beneficial or even necessary.

When screening for hypertension is proposed, higher levels of blood pressure for older age groups give fairly satisfactory results. The yield of previously unknown confirmed cases was low in Baltimore. However, the results confirmed that hypertension is more prevalent in older women than in older men, in Negro than in white persons, and more prevalent in severely obese persons than in those not severely obese.

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Episioperineorrhaphy

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EPISIOTOMY and immediate perineorrhaphy is the life long interest of every obstetrician. He thinks about it, talks about it, writes about it, and ever strives to improve his performance of it. In 1929 Royston and Hadden laid down the principles which inspired M. Pierce Rucker to the perfection of a technic, the performance of which relieves most parturients of perineal pain, obstetricians of concern for perineal healing, and gynecologists of rectocele repair.

These principles were reiterated in 1939 when he wrote: "An immediate repair of the perineum is always accompanied by considerable swelling of the tissues. If sutures are tied tightly enough to bring the edges of the wound in apposition, the next day they will be cutting and constricting the tissues. This is both painful to the patient and inimical to healing. If the sutures are tied loosely one may not get primary union. In other words, one must tie the sutures so loosely that the edges of the wound will just come in contact on the second day, a nicety of judgment I was never able to acquire. If no knots are used, the sutures adjust themselves to the subsequent swelling and keep the divided tissues in apposition without constriction or interference of blood supply."

On this principle there evolved out of the combined experience of Rucker and Whitfield a technic so simple, so rooted in parturient physiology that it could have been developed only by those who spent many long years before the perinea of parturient women.

THE EPISIOTOMY

The presenting part, breech or vertex, approaches the perineum. When the labia begin to separate, the incision is made. To await crowning or bulging is to obviate the need for episiotomy because stretching and laceration of the "levator sling" has already occurred. Perineal support depends upon incision and immediate repair of mucosa, endopelvic fascia, urogenital diaphragm, superficial levator fascia, muscle, and perineal skin.

BICKERS, WILLIAM, *Attending Obstetrician to Richmond Memorial, Retreat for Sick, Sheltering Arms, and Evangeline Booth Hospital.*

The incision is a mediolateral one. This literally means: median incision in the vaginal mucosa; oblique incision in the perineal body. The hymen is nicked in the midline with scissors and mucosa and endopelvic fascia are incised for several centimeters. (Fig. 1.) The vaginal blade of the scissors is then directed laterally beneath the mucosa and a mediolateral incision is made in the perineal body. It is a two-step procedure: median incision of mucosa, mediolateral incision of the perineal body.

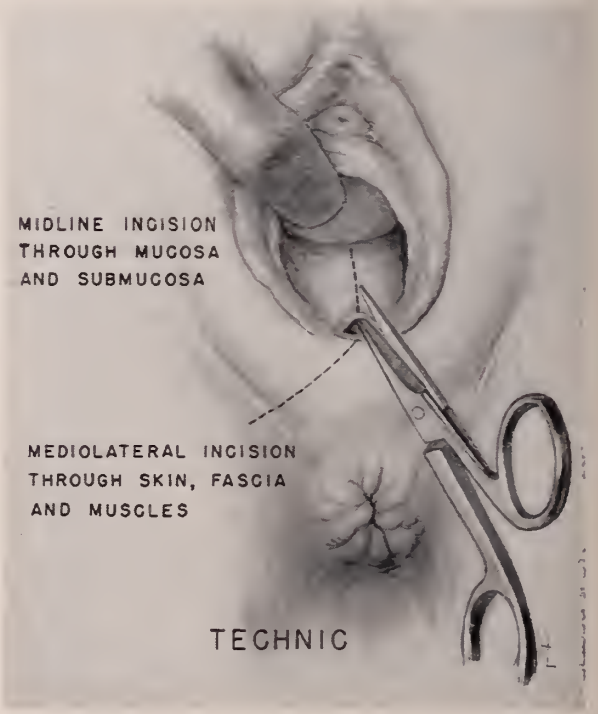


Fig. 1—The episiotomy is a two-step procedure: median incision of the vaginal mucosa and mediolateral incision of the perineal body.

The common error in mediolateral episiotomy is incision of mucosa and perineal body with a single bite of the scissors. (Fig. 2.) This produces an oblique incision in the mucosa, difficult of approximation, with its upper angle in the lateral sulcus favoring extension. (Fig. 3.) The two-step procedure makes for easy approximation of the mucosa, eliminates the hazard of extension, and blood loss is less in the relatively avascular mid-zone. Mediolateral incision in the perineal body reduces the hazard of third-degree laceration.

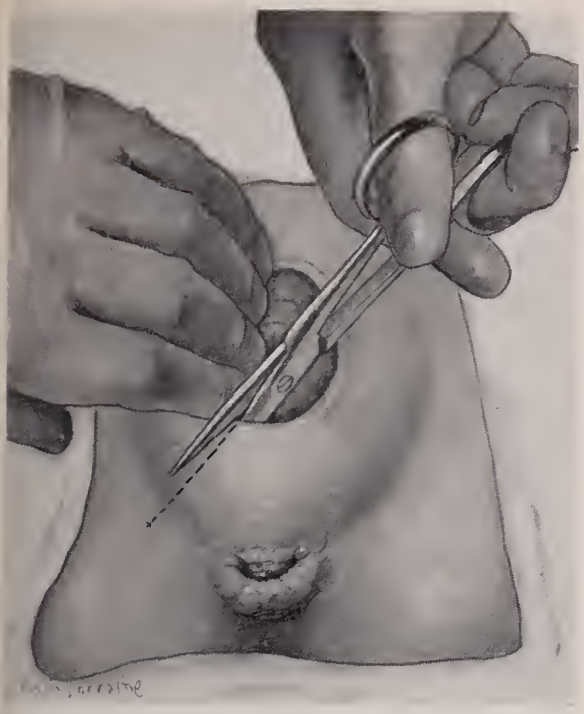


Fig. 2—A common error in the performance of mediolateral episiotomy is incision of the mucosa and perineal body with a single bite of the scissors.

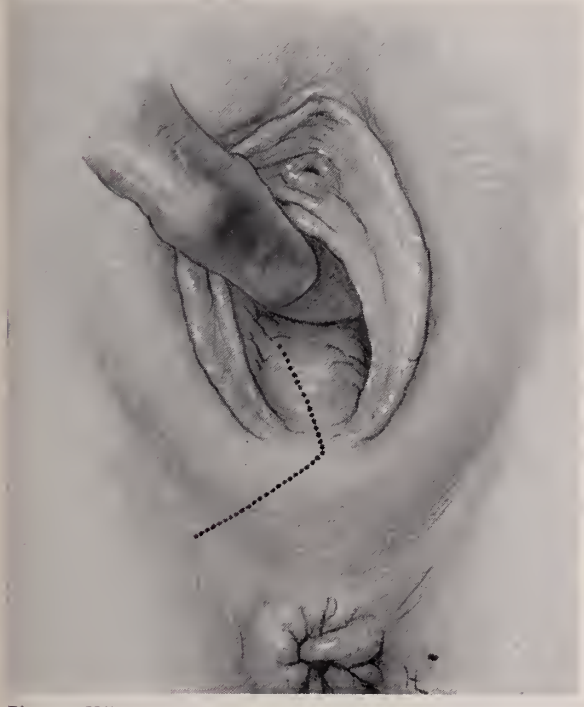


Fig. 3—When the mediolateral episiotomy is made with a single bite of the scissors an oblique incision with its upper angle in the lateral sulcus is the inevitable result. This favors extension.

THE PERINEORRHAPHY

Perineorrhaphy following episiotomy, unlike other surgical procedures, is accomplished in partially devitalized, edematous, contaminated tissue. Free and unrestricted vascular and lymphatic flow and the absence of lochia beneath the suture line are essential to primary healing. How can these prerequisites for healing be accomplished? First there should be *no knots,* no constriction of vascular and lymphatic flow. Second, the mucous membrane and the perineal skin must be impervious to lochial drainage into the perineal body.

The upper angle of the vaginal incision is closed with a locked bite of 0 chromic on an atraumatic 1 in. curved needle. Actually the type of suture is of little significance. The important first step is to get the suture well above the angle so as to make it impossible for lochial drainage to find its way into the perineal body. The tail of the suture is grasped with a hemostat and held by the assistant or thrown over the patient's abdomen. Continuous locked chromic then approximates the mucosa and endopelvic fascia down to the hymeneal ring. (Fig. 4.)

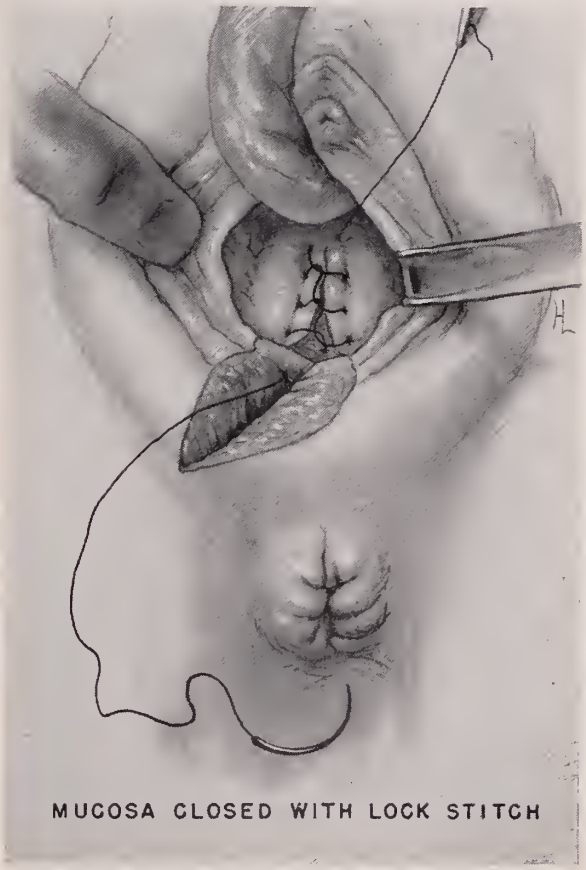


Fig. 4—Perineorrhaphy is accomplished with a single strand of 0 atraumatic chromic. The first bite is well above the upper angle of the median vaginal incision, even higher than the illustration would indicate. A continuous locked suture approximates the mucosa and submucosal tissue down to the hymeneal ring.

When the mucosa is closed the needle passes posterior to the hymen and emerges deep in the trough of the perineal incision. It continues with descending transverse bites to close the deep muscle layers down to the lower angle of the perineal incision. (Fig. 5.) The suture is then reversed and a series



Fig. 5—After closure of the mucosa the needle is passed posterior to the hymen and comes out deep in the trough of the perineal incision. The muscles are closed with a series of descending transverse bites.

of ascending transverse bites approximates the superficial levator fascia. (Fig. 6.)

At this point the perineal body is lying in apposition and only the skin and subcutaneous tissue remain to be closed. Employing the same strand a series of descending subcuticular bites approximates the skin. On reaching the lower angle the needle is passed deep into the perineal body and brought out several centimeters lateral to the incision. (Fig. 7.) The strand is grasped with a hemostat and the needle is cut off. *In the entire procedure not a single knot is tied.*

The placenta is delivered, if it has not already separated and delivered during the perineorrhaphy. Relaxation sometimes occurs during delivery of the placenta. This is compensated by traction made on the two free ends of the suture. The ends are cut leaving several centimeters of catgut exposed



Fig. 6—The superficial levator fascia is closed with the same suture ascending in a series of transverse bites.



Fig. 7—The skin is closed with a descending subcuticular suture of the same strand. When the lower angle of the skin incision is closed, the needle is passed deep into the perineal body and brought out at the base of the labia majora.

at the upper vaginal angle and on the perineum. It is important to leave at least 2 cm. During the first 24 to 48 hours of healing edema occurs and the suture retracts.

When doing this repair for the first time one cuts the unknotted ends of the single strand suture with fear and trepidation, certain that separation of the perineal body must ensue. The fact is that after 48 hours the two ends of the strand are found to have retracted for about 1 cm. Healing is almost invariably by primary union. Indeed, the routine employment of this technic makes one almost unaware of perineal breakdowns.

There is no postoperative care other than usual cleanliness. Patients are permitted bathroom privileges at will.

CONCLUSIONS

The modified Rucker-Whitfield episioperineorrhaphy is a surgical procedure based on physiologic principles peculiar to the parturient vagina and perineum.

The episiotomy is a two-step procedure: *median incision of the mucosa; mediolateral incision of the perineal body.*

The perineorrhaphy is accomplished with a single strand of 0 chromic. It approximates the mucosa in the midline and the perineal body mediolaterally in a continuous suture of four layers. The ends of the suture are left free at the upper angle of the vaginal incision and at the lower angle of the perineal incision. In this edematous, partially devitalized, contaminated tissue *there is no knot tied.*

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Report Suspected Influenza Cases

An editorial in the June 29th Journal of the American Medical Association urges all physicians to report any suspected cases of Oriental influenza immediately to their health departments.

Epidemics of influenza have swept various Far Eastern countries, and U.S. Public Health Service officials expect outbreaks to occur in the United States as more travelers return from the Orient.

By reporting any suspected cases to local health departments, the cases can be quickly investigated and laboratory diagnosis made. U.S. Public Health Service epidemic intelligence officers assigned to state and local health departments will assist in such investigations. As new developments occur, the medical profession will be kept informed through medical channels. In the meantime, "full advantage" should be taken of the resources of the state and local health departments. They are in constant receipt of information and have lists of laboratories with facilities or diagnosing influenza.

A center for epidemic intelligence is being maintained in the National Office of Vital Statistics of the Public Health Service, and summaries of this information appear weekly.

In addition to following the epidemics in the Far East and on commercial and U.S. Navy vessels, the U.S. Public Health Service and the World Health Organization have set up an extensive program for tracing and preventing outbreaks in the United States.

The disease, caused by a new form of type A influenza virus, has typical influenza symptoms; rapid onset, fever, general tiredness, muscle aches, and running nose. It last three to five days. Attack rates have been as high as 19 per cent, although mortality rates have been less than 1 per 1,000 cases. Most deaths occurred in infants and persons already weakened by age, chronic illness or hunger.

Hormonal Management of Spontaneous Hemorrhage

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SUDDEN and unexpected hemorrhage is one of the most formidable and alarming problems in medicine. This bleeding happens without warning and usually with no intimation of previous disease. The most frequent site is the nose, but hemorrhage can take place anywhere in the respiratory, gastro-intestinal or genito-urinary tract and in such volume as to shock and almost exsanguinate the victim. Less evident forms occur in the enclosed cavities and into organs where even drops of blood can inflict irreparable damage. Subarachnoid, intra-ocular, pericardial, intramural vascular bleeding and others are in this category but will only be mentioned in this discussion.

I have advanced the theory that all these hemorrhages are the result of a single disease which, for want of a better term, has been labelled "Spontaneous Hemorrhage"[1-5]. That these hemorrhages are not spontaneous is evident. That they are different is equally obvious but the differences lie only in the tissues and types of vessels affected. The common factor is the sudden, unexpected and often unsuspected release of blood with manifestations of almost infinite variety, depending upon where it happens.

This contribution deals with the hormonal management of those hemorrhages which are either visible or easily discovered. For example, gastro-intestinal bleeding, even from a peptic ulcer, hemorrhoids or varicosities of the esophagus, may not be apparent at first, but its presence is soon revealed by shock, a change in the stools or the onset of vomiting. Nor is this bleeding always in great volume. Instead there may be a slow, steady loss or repeated small hemorrhages which, in due course, can reduce the blood volume to the minimum compatible with life. Bleeding arising from the so-called hemorrhagic disorders or associated with tumors or infections are not to be considered. Gynecological bleeding, although hormonal in origin, also will not be included.

The present management of spontaneous hemorrhage is based solely on efforts to locate and then occlude the bleeding point. The many devices for this purpose, such as nasal packs, subtotal gastrectomy, hemorrhoidectomy or balloons in the esophagus are directed at the bleeding but not the disease. Moreover these expedients are of no avail when, as so often happens, the source of bleeding is obscure or inaccessible. If, as I have maintained, these hemorrhages are hormonal in origin, then they should respond to hormone therapy. So many hemorrhages have been arrested by this means that I consider hormonal control to be the treatment of choice which can be supplemented by such other measures as may be deemed necessary, if and when they become feasible. The method is not infallible but it does offer a provocative approach to this perplexing disease.

ILLUSTRATIVE CASES

These cases are neither rare nor exceptional. No abnormality of the blood, other than secondary anemia, was found and in all the clotting mechanism was normal. Hypertension was a factor in only one case and, in my opinion, is not a cause of bleeding. Race makes little difference and sex does not enter the picture since in the entire series almost as many men as women were affected. Intravenous estrogen, occasionally augmented by cortisone, with narcotics and transfusions, was the only therapy employed. All but two of these patients were treated by colleagues.

Case No. 1. V.K., female, age 62, was brought to the hospital with hemoptysis. She was in moderate shock and the hemoglobin was 7.5 grams. She was given 20 mg. of estrogen intravenously and her condition began improving in about 30 minutes. Two days later she had another moderate hemorrhage which also responded to intravenous estrogen. Investigation of the lungs and abdomen failed to reveal any source of bleeding, although undoubtedly it was pulmonary in origin.

Case No. 2. S.H., female, age 66, entered the hospital for hematemesis, tarry stools and congestive failure. She had only 5 grams of hemoglobin and was given a transfusion with 20 mg. of intravenous estrogen. About 6 hours later, she again vomited

bright red blood and another 20 mg. of estrogen was given. There were two more episodes of this nature several days apart but with diminished bleeding. She began improving after the first dose of estrogen and the bleeding finally ceased. Her cardiac reserve, although not good, also improved. An asymptomatic ulcer was found in the duodenum.

Case No. 3. S.R., female, age 39, was admitted to the hospital for severe epistaxis and hypertension. Estrogen was given intravenously and the bleeding stopped in 35 minutes. It started again in 3 hours and another dose of estrogen was given which was equally effective. The bleeding then returned several times but at intervals of days. Each hemorrhage was smaller and quickly controlled until they stopped altogether. My impression of this patient is that she would have endured packing for days and then required arterial ligation to control the bleeding.

Case No. 4. L.C., male, age 39, was admitted to the hospital for rectal bleeding. The hemoglobin was only 4.75 grams. The history began with a severe hemorrhage 5 years previously for which he was admitted to a hospital but was not operated upon. Two years ago hemorrhoidectomy was done but he still bled intermittently. During this admission, after sufficient transfusions had been given, another operation was done and the major portion of the bleeding area, in the hemorrhoidal region, was excised. Six days after operation, he had another hemorrhage which continued until estrogen therapy was instituted. This case is one of many which illustrates the persistence of the disease and the inadequacy of operation.

Case No. 5. L.S.N., male, age 76, had increasing difficulty with urination for 6 months when he began voiding small amounts of almost pure blood. He was admitted to the hospital and rectal examination disclosed a smooth, hypertrophied prostate. Catheterization released a large amount of bloody urine. The catheter was left in place and it continued to drain bloody urine until 20 mg. of estrogen was administered. He was given another dose the next day and then 1.25 mg. by mouth daily thereafter. He refused cystoscopy. Four days later the catheter was removed and he began voiding normally. This event occurred 14 months ago and he has had no further difficulties with either bleeding or voiding.

Case No. 6. J.S., male, age 64, was admitted to the hospital with hemoptysis, epistaxis and a history of tarry stools during the past week. He was in moderate shock and the hemoglobin was 7.6 grams. Intravenous estrogen with cortisone and a transfusion were given at once. The epistaxis stopped in about 40 minutes and his condition began improving within an hour. The estrogen was repeated several times until his stool was clear of blood. The source of the hemorrhage could not be found.

Case No. 7. A.S.D., male, age 55, had been admitted to the hospital on several occasions with severe chronic nephritis, hypertension, arteriosclerosis and gastro-intestinal bleeding. The hemoglobin would be low and tranfusions were always started immediately. During one admission, he was given 24 transfusions in 10 days. The stools still were tarry and the hemoglobin at the time fell to 3 grams. Estrogen was administered intravenously and the stools became clear the next day. The hemoglobin began rising and x-ray studies failed to reveal the source of hemorrhage. He had no more bleeding but finally succumbed to the nephritis. At autopsy, the only possible source of bleeding was a tiny ulcer in the lower ileum.

The opinion of Lewison[6] regarding peptic ulcers is applicable to this case: most bleeding ulcers are not due to actual penetration of blood vessels and the extent or severity of bleeding may not necessarily be related to the size of the ulcer or the magnitude of the vessel.

Case No. 8. L.S,. male, age 68, had had a transurethral prostatic resection 3 weeks before coming to my office in the middle of the night, voiding almost pure blood. His convalescence had been normal and he had been home nearly 2 weeks before this misfortune awakened him. A catheter was inserted and 600 cc. of almost pure blood was evacuated but bright red blood still continued to drip. Estrogen was given intravenously and the bleeding apparently stopped but recurred 6 hours later. He was admitted to the hospital and a retention catheter was inserted. The bleeding was controlled with repeated injections of estrogen and a week later, cystoscopy was done. The area of operation seemed to be well healed with no evidence of recent sloughing. The fundus of the bladder could not be seen because of tenacious clots which resisted all attempts at evacuation. Finally suprapubic cystotomy was done and the clots removed but the bladder mucosa and the prostatic bed were entirely normal. There has been no recurrence of the bleeding.

Case No. 9. M.T., male, age 70. This case upholds my belief that spontaneous hemorrhage is a clinical entity in itself, that merely arresting the hemorrhage does not cure this disease and if one

avenue of bleeding is closed, another will develop. Over a period of 6 years, this patient had 3 operations, 2 gastric resections and a vagotomy, for bleeding peptic ulcer. He remained free of bleeding for several years until he suddenly had severe hemoptysis from a telangiectatic area at the base of the tongue. This bleeding was rapidly controlled with intravenous estrogen. Three months later, it was necessary to excise an ulcer from his lower lip, the result of irradiation therapy of an epithelioma. Twelve hours after operation he had a large hemorrhage from his nose and this bleeding also responded to estrogen.

Case No. 10. M.H., female, age 39, was referred to me for the removal of bleeding hemorrhoids. She had a long history of rectal bleeding but during the previous 2 months, had bled every day after a stool and sometimes these hemorrhages were quite large. Examination revealed internal hemorrhoids which did not prolapse but there were no polyps or other disease beyond them. The hemorrhoidal vessels were large, dusky in color and oozing a small amount of bright blood. Estrogen was given intravenously and repeated the next day and the bleeding promptly stopped. Examination a few days later disclosed the dilated veins had shrunk and the mucous membrane over and around them had resumed its normal color. Six months have elapsed and there has been no recurrence of the bleeding.

This therapy is recommended only for uncomplicated internal bleeding hemorrhoids. When bleeding is associated with prolapse, thrombosis or any other complication, it should be stopped before intervention is undertaken.

Case No. 11. The case of F.G., male, age 23, demonstrates the effect of estrogen on delayed hemorrhage. He had had a lower molar extracted and 3 days later began bleeding from the cavity. Packs, hemostatics and other measures were taken but the bleeding continued for 2 weeks until the patient was sent to the hospital. After intravenous estrogen had been given, the bleeding stopped in about 30 minutes and did not recur.

Case No. 12. G.B., male, age 55, was admitted to the hospital for massive gastro-intestinal bleeding. The history began with tarry stools of 3 days' duration but there had been no pain or other symptoms referable to an ulcer. Shortly before coming to the hospital, he had a massive hemorrhage and vomited large amounts of blood. He was in partial shock and was given a transfusion immediately. Twenty mg. of intravenous estrogen was inserted into the tube. The shock disappeared and he began to improve rapidly. Subsequently he was given daily injections of estrogen in oil and he had no further evidence of bleeding during his stay in the hospital. An ulcer was found in the duodenum.

Case No. 13. W.P.D., male, age 78, had a long history of gastro-intestinal bleeding, beginning 12 years ago. There never had been any discomfort but the bleeding increased in severity until 6 years ago when he was admitted to another hospital. The typical attack would begin with a feeling of faintness and a cold and clammy skin. The next stools were either tarry or contained bright red blood. He would have three or four attacks a year and had been admitted to the hospital on six occasions but no source of bleeding could be discovered.

Two years ago he was admitted to the Petersburg General Hospital during a bleeding episode. Examination revealed that he was having a typical attack but, in addition, that he had numerous areas of hereditary telangiectasia on his skin. A heart block also was demonstrated but no source of bleeding could be found. He was given estrogen therapy and the bleeding has not recurred for two years. The areas of telangiectasia have turned from a bright red to almost a dark brown. It is presumed that he has similar lesions in his gastro-intestinal tract.

Case No. 14. D.B., male, age 2½ years, had frequent small nosebleeds for almost a year. During the week before admission to the hospital, they occurred every day and were becoming much larger. No abnormality of the blood was found except the hemoglobin was only 8 grams and there was moderate microcytosis and hypochromasia of the red cells. He was given ½ mg. of estrogen in oil and this dose was repeated the next day. He has had no further trouble for two years. It is surprising how many children are apparently cured of epistaxis after one or two attacks are halted by estrogen.

Case No. 15. P.F., female, age 18, had been ill with rheumatic fever and recurrent epistaxis since she was 6 years old. From 1947 to 1955, she had been admitted to the hospital 12 times for severe epistaxis but there had been many minor nosebleeds between these major attacks. She had been receiving cortisone as part of her treatment long before her last admission in April, 1955, when she bled almost to exsanguination before she could reach the hospital. This time she received estrogen intravenously along with transfusions and cortisone, and the bleeding was promptly controlled. Since then she has had daily doses of oral estrogen along

with cortisone and has had only a few minor attacks. For the first time in her life she has been able to attend school without interruption.

Case No. 16. V.H.W., white male, age 46, was admitted to the hospital with severe hematemesis. The abdomen was distended with fluid, the liver extended down almost to the umbilicus, and he had only 4.05 grams of hemoglobin. He continued to vomit blood and after 4 transfusions, the hemoglobin rose to only 4.7 grams. The transfusions were stopped and intravenous estrogen was given. Fifty minutes later, he vomited a large quantity of dark blood containing many clots and then had no more bleeding during his 21 days' stay in the hospital. The estrogen was repeated in 4 hours and 2 mg. of estrogen in oil was given daily for a week. As much as 2 gallons of fluid were taken from his abdomen at one time and obviously he was a poor surgical risk. Four months later, he was admitted again. This time the hemoglobin was 6 grams and the bleeding was equally profuse. Again he responded rapidly to estrogen therapy and was discharged 8 days later. He was readmitted after 3 months. There was no bleeding but he was in extremis and died in 24 hours. At autopsy, portal cirrhosis and esophageal varices, the source of the hemorrhages, were among the findings.

THERAPY OF SPONTANEOUS HEMORRHAGE

This therapy is based on the treatment of epistaxis, the commonest form of this disease and an analogue of functional uterine bleeding. One hundred and twelve patients with nose bleeding of sufficient volume to warrant hospitalization were admitted to the Petersburg General Hospital during the last 4 years. Forty more were treated in the Outpatient Department during the past year. With the exception of only a few, for whom packs were used early and then discarded, intravenous estrogen occasionally augmented by cortisone was the only therapy employed. Cortisone was particularly useful in epistaxis associated with rheumatic fever and leukemia. A narcotic to quiet the tension and panic of this situation was given routinely and the estrogen was repeated as often as every 3 hours when indicated. Other than the occasional toxic symptoms of headache and nausea, which subsided quickly, there were no ill effects from the hormones.

When gastro-intestinal or genito-urinary bleeding occurred, the general condition of the patient was the only guide that could be of service. Blood pressure, slowing of the pulse, reduction of tension and improvement in the general welfare were closely observed since real evidence that the bleeding had stopped could not be ascertained before several hours had elapsed. Delayed postoperative or posttraumatic hemorrhages were treated in the same way.

For children, intramuscular injection of estrogen in oil is perhaps superior to intravenous estrogen since the difficulties of administration are avoided. Infants up to about a year require .5 mg. and larger children can easily tolerate 1 mg. without ill effects.

The treatment of hemorrhages into closed spaces presents entirely different problems. Since the blood is confined and cannot escape, the damage is done the instant the bleeding happens. If, as Paterson[7] claims, 90% of all coronary occlusions are due to intramural bleeding in these arteries, then this therapy can only prevent the extension of the injury. Unusual results have been obtained in patients with subarachnoid hemorrhage but here again the outcome is determined by the rate and explosiveness of the bleeding.

One need not expect the bleeding will stop immediately after the estrogen has been given. Nor can the arrest of this hemorrhage be considered in the conventional terms of packing and formation of blood clots or cauterization, ligation and excision of the bleeding point as measures for occluding or eliminating the vessel or vessels. These measures apply to traumatic or surgical bleeding but spontaneous hemorrhage is altogether a different disease for which they are illogical and often inadequate. Blood will continue to escape through or around tight nasal packs and even ligation of the pancreatic-duodenal artery has been followed by postoperative hemorrhage.

There is no need to hurry since these patients can withstand the loss of large quantities of blood with impunity. Moreover, the fact that the source of hemorrhage seldom can be determined during the period of active bleeding emphasizes the importance of a therapy which does not depend upon reaching the bleeding site. It is better to avoid giving transfusions unless the patient is in shock and even then I have not been impressed with their efficacy. One often feels impotent when confronted with this situation and powerless while anxiously waiting for the effect of a hormone to dispel this gory scene which cries out for action. Yet I have found it far superior to hasty and sometimes ill-contrived measures.

Oral estrogen therapy after the bleeding has stopped has been found to contribute to a feeling of

fitness and a sense of well-being. Many of these patients complain of restlessness, tension and insomnia which this therapy seems to relieve to some extent. That it will prevent a hemorrhage cannot be stated with certainty since the circulating estrogen is subject to intrinsic variations for which the administered dosage may not always compensate. It has been my practice to give from one to three mg. of estrogen daily and reduce or withdraw the hormone if headache, nausea, swelling of the breasts, especially in men, or uterine bleeding supervene.

RATIONALE OF THERAPY

This therapy is largely empirical and its rationale rests on the theory that spontaneous bleeding, wherever it occurs, is due to an endocrine imbalance with a decline in estrogens as the most prominent malefactor. This decline incites the elaboration of a toxin with a peculiar affinity for the vascular system which Smith and Smith[8] believe to be the agent which precipitates the onset of menstruation. Macht[9] and his associates, over thirty years ago, showed that the blood of menstruating women is poisonous to certain plants and seedlings. Recently he demonstrated the serum of the circulating blood contains a toxin which he calls "menotoxin" that is lethal to small laboratory animals. Hence the endocrine changes of menstruation are capable of creating a powerful toxin. Should analogous changes occur in either sex when the exit normally sanctioned by nature is absent or inadequate, then this toxin or a variant will attack the vascular system elsewhere, sometimes with disastrous results.

The causes of the decline in the circulating estrogens are unknown but certainly stress plays a leading role. Just what does take place is also unknown since there are at present no criteria to which the diagnosis or therapy can be referred. The bleeding is not a sudden development but the culmination of a slow and deliberate process which requires days or weeks to reach this climax. Clinical experience so far has been the only useful guide and there can be no other until investigation and invention furnish a more reliable foundation.

Even clinical experience must be tempered by the fact that so many of these hemorrhages will stop of their own accord. But which hemorrhage will stop is another matter and each patient presents an individual problem. It would be like predicting which acutely inflamed appendix will subside. Hence this therapy has been given to all bleeding patients with sometimes spectacular and dramatic results. Then further studies were done to discover the source of the bleeding and if other measures were necessary.

COMMENT

It is singularly true that little study has been devoted to epistaxis, surely an ordinary and familiar condition. There has been no explanation of why the hemorrhage starts or why it stops, why such a huge volume of blood can escape from a surface which previously had no vessels of sufficient caliber to carry this large quantity and why, soon after the bleeding has subsided, these vessels disappear, the congestion subsides and the mucous membrane returns to its normal state. Then, again, if this transient phenomenon can take place in the nose, could it not happen elsewhere?

In previous articles, I have elaborated the theory of the origin of this disease, proposed a description of the pathology with an explanation for epistaxis, and presented a larger series of cases. I do not believe that estrogen or cortisone will prove the final answer to this common problem but certainly it has been more effective than other surgical and medical expedients. Of course, it may not be adequate if large vessels, especially of the stomach, have been penetrated. In this event, it may be a valuable adjunct since operation on actively bleeding patients has an extremely high mortality.

The action of estrogen is not clear and certainly it is not a hemostatic. My impression is that it affects the blood vessels themselves, for in those few cases when the vessels were on the surface, the bleeding stopped even though the apertures remained open. Moreover, the color of the vessels, as seen in the rectum and the nose, changed from a congested cyanotic appearance to a more normal hue. The creation of vascularization processes described by Paterson[10], Winternitz[11] and Wartman[12], the origin of which is unknown, also must be considered. These capillaries rupture easily and it may be that estrogen either reduces their fragility or neutralizes a vascular toxin affecting them. The blood itself is unchanged and the power to form clots is unaffected. Hence, measures directed at increasing its coagulability are useless and unnecessary.

Critics of this therapy protest that the cessation of bleeding after the administration of estrogen is coincidental since so many episodes terminate without treatment, a fact that cannot be denied. The number of coincidences has been remarkable. For example, there have been many incidents such as the following: A physician had a sudden, severe

nosebleed for which he was admitted to a hospital in another city. For 4 days and nights, he suffered tight anterior and posterior packs, along with several transfusions daily and large amounts of narcotics, and still he continued to bleed. Finally ligation of an artery was contemplated but it was decided to try estrogen therapy as a last resort. The bleeding stopped in 25 minutes and did not recur. Menger[13] has reported similar experiences.

The action of estrogen also is the subject of controversy and there are many aspects of this unified concept of spontaneous bleeding that are vague and cannot be substantiated. A vascular toxin analagous to the menstrual toxin has not been demonstrated in men although all the components and prerequisites for bleeding except the uterus are common to both sexes. The technic of Macht may be useful for this purpose. Anticipating the existence of such a toxin may serve as an explanation but it is a postulate that is far from reality at this time. The inclusion of peptic ulcer into this category seems to be especially farfetched. However, even a cursory perusal of the literature discloses it is replete with contradictory advice and there is little agreement on many elements of this disease. It is not as simple as the popular notion that penetration of a blood vessel by an ulcer is the cause and the source of bleeding. The facts that the majority of bleeding ulcers are asymptomatic, the x-ray appearance and pathology are different and recurrence is frequent even after the bleeding point has been unquestionably excised should at least arouse suspicion that forces other than ulceration are in operation.

Spontaneous hemorrhage, as I define it, is an extremely complex and varied condition of which episodic bleeding is only one manifestation. The many changes in metabolic and biochemical activity in this disease, which has such a high mortality and morbidity, have just begun to be explored.

The earliest reports on the successful use of estrogen to control bleeding appeared in 1936[14,15]. I did not know of these publications when I began to employ hormones for this purpose in 1937, long before intravenous estrogen because available in 1952*. Hence there has been ample opportunity to observe the effect of this hormone on numerous patterns of spontaneous bleeding and to conclude that it is our most valuable agent for arresting this kind of hemorrhage.

* Ayerst Laboratories, New York City.

SUMMARY

Sixteen cases of spontaneous bleeding into open spaces are presented to demonstrate that estrogen given intravenously has a striking and beneficial effect on the bleeding. These hemorrhages, unlike obscure or unsuspected bleeding into organs, cavities or spaces, were obvious or easily discovered and provided a more convincing test of the action of the hormone.

The theory has been advanced that all these forms of bleeding are due to one instead of many diseases and that hemorrhage and its sequelae is the principal but not the only characteristic of this disease. Its manifestations are almost infinite and do not depend entirely upon the quantity of blood lost. Whether blood escapes into spaces or whether it is confined are the determining factors.

The conventional methods for arresting surgical or traumatic bleeding are illogical and often inadequate for spontaneous hemorrhage. Hormonal therapy is the treatment of choice. Then, when the bleeding has slackened or stopped, further diagnostic and therapeutic measures can be undertaken as they are indicated.

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Summer Vacation Rules

In addition to listing some helpful "do's and don'ts" for pleasant vacations, three articles in the July Today's Health gave some "whys." The articles in the magazine, which is published by the American Medical Association, dealt with sunburn, artificial respiration, and sightseers' foot care.

A New York City physician, Dr. James A. Brussel, explained why some people sunburn more readily than others. Physical, glandular, genetic and chemical factors all play a role in a person's susceptibility, along with time of day, weather and geography. Surveys show that blue-eyed persons are particularly prone to suffer from sunburn, as are blonds and redheads. Negroes fare better than Caucasians under the sunburning or ultraviolet rays. Scientists think this difference is not due to pigmentation but rather to some undiscovered factors. Sunburn occurs more frequently in women on the first day of the menstrual cycle and between the second and seventh months of pregnancy, apparently because glandular factors influence the protective pigmentation and hardening of the skin. Perfumes containing oil of citron or bergamot applied to the skin increase susceptibility to sunburn. So does taking sulfa drugs.

Miss Sue Gerard, a physical education teacher at Christian College, Columbia, Mo., told how to save a life with artificial respiration. If a person is not breathing, he will die within a few minutes. Lack of oxygen, or suffocation, is the cause of death in drowning, gas poisoning, cave-ins, electrocution, strangulation and certain blows on the head. Artificial respiration must be started at once.

"Exhaling is the thing that a suffocating person cannot do alone. Pressure on his 'breathing box' will cause him to exhale; when that pressure is relaxed air will likely rush in." Today's back-pressure arm-life method not only makes the patient exhale, but also helps him to inhale. A pocket-sized card, illustrating the method, may be obtained by sending a self-addressed stamped envelope to the A.M.A. Council on Medical Physics, 535 N. Dearborn St., Chicago 10, Ill.

Mrs. Veronica L. Conley, secretary of the A.M.A. committee on cosmetics, offered some tips for foot care while sightseeing, and explained why feet get so tired. She recommended daily foot bathing and massage and a reasonably wide wardrobe of shoes for various activities. For lots of sightseeing and walking, shoes with a low or medium heel that fit snugly at the heel and give good arch support are the "best bet."

Standing is one of the most tiring positions. Blood tends to stagnate in the feet and circulation is generally slowed down. This is why one may be dizzy or even faint if forced to stand for long periods in one place. "Avoid standing too long. Shift your weight from foot to foot and move about, even if the area is limited. Pull yourself up on your toes and curl and uncurl your toes inside your shoes."

She also suggested sitting down whenever possible with the legs elevated by putting the feet on the rung of the chair, or by propping them up on another chair.

When a person can't leave the group, the feet can still be relaxed by inconspicuously slipping one shoe off at a time, lifting the foot, rotating it at the ankle and stretching the toes.

When the sightseer finally gets home, he may relax his tired feet by lying on a bed with his feet placed against the wall so his legs make a 45 degree angle from the spine.

Experiences with Nicotinic Acid in Diabetes Mellitus

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BOTH RABBITS and rats were seen to develop diabetes following administration of alloxan. Alloxan-[2,4,5,6] tetraoxohexahydro-pyrimidine or mesaxalylurea was produced by Liebig in 1838 by slow oxidation of uric acid by nitric acid. It was found by Liebig in the mucus excreted during dysentery. Accordingly it was believed to be produced in the human body. Janes and Schueler[1] were able to prevent the diabetogenic action of alloxan by simultaneous administration of either nicotinamide, benzamide or propylene glycol, or either n-propyl or isopropylalcohol. At an earlier date Banerjee[2] was able to accomplish the same with nicotinic acid, pyridine dicarboxylic acid and 2-phenylquinoline-4-carboxylic acid. When 100 mg/Kg of both alloxan and nicotinic acid were injected by this author into the ear veins of five rabbits, none of them developed diabetes. Three other rabbits were injected with 200 mg/Kg of each preparation; of these, two rabbits developed hypoglycemic convulsions and died; the third rabbit survived it. Dunn and al.[2] believed that possible defects of the metabolism of purines or of alloxan in a man may play an important part in the causation of diabetes. If the diet contains a sufficient amount of nicotinic acid, it may combine with the alloxan formed in the faulty metabolism and prevent the development of diabetes.

Boldyreff[3] reported, at the meeting of the American Physiological Society in the spring of 1935, that nicotinic acid exerts a mild hypoglycemic action which appeared to be most pronounced in turtles. In a letter received from this author, dated June 22, 1956, he stated that he had been using nicotinic acid rather extensively for therapeutic purposes and was able to obtain satisfactory results in selected cases of diabetes mellitus. Neuwahl[4] investigated the action of nicotinic acid in 15 nondiabetic and 12 diabetic patients. He believed that the blood sugar depression curve and the effect of nicotinic acid on the arteriovenous difference in dextrose and in the response to injected insulin suggested that nicotinic acid may potentiate the action of insulin. The administration of nicotinic acid appeared to improve the carbohydrate tolerance of diabetic patients. Janes[5] has not been able to confirm the hypoglycemic properties of niacin but in the course of experiments with fasting rats he has noted that nicotinic acid has produced a significant increase of the glycogen content of the liver. As has been recently stated by Miller and Dulin[6], Orinase, 1-butyl-3-tolyl-sulfonylurea, was seen to increase the liver glycogen, while insulin increased the muscle glycogen. It is now known that the insulin sparing activity of Orinase is limited to older patients who have never received insulin or have been treated with insulin only for a short time and have no atrophy of disuse of the Langerhans islets. Because of the serious side effects seen to develop in 5 per cent of the patients receiving carbutamide, 1-butyl-3-sulfonylurea, the clinical trial of this drug has been suspended by Eli Lilly and Company and the production of this drug discontinued. Orinase is still produced.

The insulin sparing effect of nicotinic acid and other vasodilatating drugs has been attributed by Frieb[7] not to specific action but to improved vascularization of the tissues. My own experiences appear to suggest that, while these drugs actually improve circulation in the tissues, revascularization is a very slow process and it takes a long time before new blood vessels can be formed. I have used nicotinic acid in my rural practice extensively since the year 1943, and the vasodilating properties of this drug (the flush) were noted by me as soon as I had begun prescribing it. Nicotinic acid is a vitamin and also an important component of Coenzyme I and II. The vasodilatation caused by it can be used to break the vicious circle of hypertension in younger patients and to improve the vascularization in older ones. It can be used to divert the blood flow from places with extensive hemorrhages as in cases of uncontrollable epistaxis, cerebral hemorrhages and so on.

On August 24, 1954, a 16 year old boy was brought to my office by his parents with a severe case of epistaxis. This patient was found to have diabetes mellitus several months before he was brought to me and he was on a diet and receiving

injections of an insulin preparation. His urine was negative for sugar. His blood pressure was 140/90 which I believed to be high for a 16 year old boy. He was given a 50 mg. tablet of nicotinic acid and told to dissolve it in the mouth. As it was expected his nose stopped bleeding, and in order to prevent recurrence and to lower his blood pressure he was given a 2 weeks supply of nicotinic acid tablets to be taken 3 times a day before meals. When he took the tablets he experienced the same sensation that he had after taking too much insulin, and this sensation was relieved when he ate sugar. Having had at that time no knowledge of the literature published previously on this subject I was very much impressed by this interesting property of nicotinic acid: it appeared to have an insulin sparing action. This patient was rather "thin" in his build.

The second case was a 67 year old woman seen by me for the first time on June 24, 1955. She was extremely emaciated and weakened to such an extent that she had to be examined in her car. She had been receiving one of the newer drugs to lower her blood pressure and had been losing strength all the time. Her blood pressure was 250/130. Two months before she had been found to have diabetes mellitus and was put on a diet and given insulin. I gave her 2 weeks supply of nicotinic acid tablets for the symptomatic relief of the hypertension and told her that should these tablets produce the feeling of having taken too much insulin, she should take some sugar to relieve these symptoms. She was seen again on July 4, 1955, and was feeling better. She tested her urine every day and it remained negative for sugar. She has experienced hypoglycemia-like symptoms on several occasions and had to take sugar to relieve these symptoms. Her blood pressure vacillated between 230/120 and 190/105, which again suggested that revascularization is a very slow process. On August 20, 1955, a calculated risk was taken and the insulin preparation was discontinued. She tested her urine for two months daily and it remained negative for sugar. She has been able to exist without insulin ever since that time. She continued to take the nicotinic acid and gradually regained much of her strength.

The third case was a 49 year old man of athletic constitution. He had been in poor health for several months with signs of diabetes mellitus. When he was first seen by me in my office on February 12, 1956, he exhibited a great deal of inner restlessness, was extremely nervous, had dark rings around his eyes and admitted that he had not been able to sleep a wink for two weeks, had had to drink a lot of water and to pass a lot of water. He had lost weight. The qualitative Benedict test was 4 plus and the specific gravity of the urine was 1038. Because of the experiences with the other two cases, as described above, I decided to find out whether it was possible to control this case of diabetes with nicotonic acid and diet only. He was given a 4 weeks supply of nicotinic acid tablets, 50 mg., to be taken 3 times a day before meals. He was seen again on March 13, 1956, at which time he was looking much better, and all the nervousness had disappeared. He stated that he was feeling much better, was able to sleep, did not have to drink much water or urinate as frequently. The examination of his urine disclosed a 1 plus sugar and a specific gravity of 1028. I continued to supply him with the tablets and while he continued to have some sugar in his urine and the specific gravity remained in the 1020's, the subjective symptoms of the diabetes practically disappeared and he was able to do hard work all of the time. He went to visit his relatives in Oak Ridge, Tenn., and while there he ran out of the tablets. When seen by me again on July 31, 1956, he had not been taking the tablets for 2 weeks and was again nervous and restless and sleepless. Again he stated that he had not been able to sleep, had to drink a lot of water and to pass a lot of water. His blood pressure was 140/90, the same as before. Examination of the urine disclosed again 4 plus sugar and a specific gravity of 1035. This suggested that his was a case of diabetes which could not be controlled by diet alone. He was again given a supply of nicotinic acid tablets and while he was taking them he felt better but the relief obtained was not as dramatic as in the previous months. He had to double the dose on many occasions and even then he could not find any rest. He kept refusing insulin injections until January 7, 1957, when he finally consented to take insulin and he is now happy and gaining weight with 40 units of NPH insulin daily. In this case nicotinic acid appeared to give complete symptomatic relief for several months until the patient interrupted the treatment. When it was started again the results obtained were disappointing and the disease had to be controlled with insulin. There are several cases of pulmonary tuberculosis in the neighborhood and the possibility of tuberculosis of the pancreas is not excluded in this case.

The fourth case was a 49 year old obese woman

(D.G.) seen on April 10, 1956. She was brought to the office with a severe case of vertigo which had persisted for 2 days. She had to be supported by 2 neighbors when she came in and was not able to stand up at all. Her blood pressure was 150/100. The urine showed 2 plus sugar and a specific gravity of 1028. She admitted that she had had a mild case of diabetes for several years and was able to get along without any special diet. A 50 mg. tablet of nicotinic acid was placed in her mouth and she was told to keep it in her mouth until dissolved. She was given a 4 weeks supply of the drug and was able to leave the office under her own power. She was seen again on April 22, 1956, and at that time her urine was negative for sugar.

The fifth case was a 40 year old obese woman (B.H.) seen by me intermittently for the last several years and treated successfully for neuralgias associated with severe hypertension. She had a mild case of diabetes and the only symptom (neuralgias) was relieved by nicotinic acid.

The sixth case was a 60 year old obese woman. This stubborn lady had had diabetes for 3 years, and her blood sugar had been very high. She refused to take insulin or follow a diet. Nicotinic acid tablets taken before meals keep her alive in spite of poor cooperation as to diet.

After several years the Scott County Medical Society met again on February 10, 1956. One of my colleagues complained of the injections of insulin that he took for control of diabetes. I told him that he might be able to do without insulin if he wanted to try nicotinic acid tablets by mouth instead of insulin by injection. On April 13, 1956, the County Medical Society met again, and my colleague stated that he had done well with nicotinic acid.

As was stated recently by Davis[8], another vasodilator in the form of beverage alcohol had, in the pre-insulin-era, been used widely in the treatment of diabetes; and even since the introduction of insulin, work done by Kola[9] had borne out the value of beverage alcohol in reducing the blood sugar level. Davis believes that arteriosclerosis, which is seen to develop early in patients treated with insulin, could be prevented by the simultaneous administration of the vasodilating beverage alcohol. I am inclined to believe that although alcohol, in spite of its shortcomings, is safer than the newer oral drugs (one of which has already been taken out of circulation), nicotinic acid is closer to the ideal as a vasodilating drug than any other tried.

Thirteen years of experiences with nicotinic acid in the treatment of both older patients with arteriosclerosis and younger patients with hypertension make me believe that although the arteriosclerotic degenerative process cannot be reversed, it can be either slowed down or halted and, in cases which have not received penicillin, a partial revascularization of devascularized areas appears to occur. While the mechanism of the intracellular metabolism of the nonketotic type of diabetes has not yet been elucidated, the fact remains that adrenalin is one of the agents which produce hyperglycemia and thus is in physiological opposition to insulin. Nicotinic acid is an adrenergic blocking agent and accordingly is supposed to counteract that part of the opposition to insulin which is caused by adrenalin.

The symptomatic relief in all of the cases that I have reported in this paper appears to suggest the following: (1) nicotinic acid, as also reported by others, exerts a mild insulin sparing action; (2) the amount of insulin given to patients with diabetes can be substantially reduced by simultaneous administration of nicotinic acid; (3) mild cases of diabetes may obtain symptomatic relief when treated with nicotinic acid only; (4) while insulin treatment is essential in severe cases of diabetes mellitus, the development of arteriosclerosis, which is seen to take place rather early even in patients treated with insulin, can be slowed down by simultaneous administration of nicotinic acid.

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Agranulocytosis Occurring During Promazine Therapy

Report of a Case

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THE AUTHORS have recently had occasion to observe a case of agranulocytosis occurring during promazine therapy. Because of the wide popularity of promazine as a tranquilizing agent, it is felt that the reporting of isolated instances of complications arising in its use serves a definite purpose in developing an accurate appreciation of possible hazards of this drug. There have been numerous case reports of agranulocytosis occurring during chlorpromazine therapy appearing in the recent literature. Recently, a fatal case of agranulocytosis attributed to promazine has been reported by Woodward and Soloman[1]. The case reported here had a more benign course and illustrates that agranulocytosis occurring with the use of promazine need not prove fatal.

CASE REPORT

The patient, a 50 year old white female, was admitted to Westbrook Sanatorium on October 5, 1956, with a history of paranoid behavior over the previous year. She had become increasingly hostile and experienced auditory and visual hallucinations. Her thought content was markedly delusional. Prior to her admission to the hospital, she had been treated by her family physician using reserpine.

On admission, physical examination was unremarkable, apart from the abnormal thought content referred to previously.

Laboratory studies on admission revealed a hemoglobin concentration of 11.6 grams per cent, red blood count of 3,930,000, white blood count of 8,400, with 74% neutrophils, 20% lymphocytes and 6% eosinophils. Urinalysis was normal; two hour postprandial blood sugar was 142 milligrams per cent, NPN was 28.5 milligrams per cent; serum bromide was negative, and the serologic test for syphilis was negative.

Following admission, the patient's behavior was such that electric shock therapy was begun without delay and between October 5 and October 18, the patient received a total of nine treatments. She was given promazine (sparine), 100 milligrams intramuscularly the evening of admission. Following this, she was given 50 milligrams of promazine orally four times daily. Chloral hydrate, 21 grains was used as necessary as a hypnotic at bedtime. Apart from a multivitamin preparation, this was her only medication. She improved gradually and on October 10 the dose of promazine was reduced to 50 milligrams three times daily by mouth.

On the afternoon of November 16, the patient complained of a sore throat and lethargy. She was found to have a temperature of 103[2] degrees with pharynx injected and a few small lymph nodes palpable in the right anterior cervical chain. Lungs were clear; pulse was regular at 136, and no other positive physical findings were noted. The patient was given aspirin, 0.6 grams each four hours and fluids were given freely. The pharyngitis persisted and on November 18 she was found to have a white blood count of 1,000 with 96 lymphocytes and 4 monocytes. Hemoglobin concentration was 10.7 grams per cent. Urinalysis showed 1-2 white blood cells per high power field, and 2 plus albumin and 3 plus sugar. On November 20, the white blood count was 1,200 with 76 lymphocytes and 24 monocytes, and the urine sugar was again 2 plus three hours post-prandially. Blood sugar was 142 milligrams per cent fasting. On November 20, a Rumpel-Leede tourniquet test was observed to be negative, and the following day a bone marrow examination showed arrest of the granulocytic series at the progranulocyte and myelocyte stage, with erythroid elements, and megakaryocytes normal. Platelet count was likewise normal. On November 18, all medi-

Editor's Note: After this Case Report was submitted to the Monthly, it was reported by another member of the staff in the Tri-State Medical Journal. The authors so notified the Monthly but it is felt the article is of sufficient importance to warrant its use in our journal.

cation was stopped and on November 19, the patient was given penicillin 600,000 units twice daily and tetracycline 250 milligrams four times daily. The patient's temperature fell by lysis and her pharyngitis cleared. Over the next week the white blood count rose to normal levels, with a normal differential count on November 26. It has remained normal since that time. Antibiotics were discontinued on November 26. On that day, a two hour post-prandial blood sugar was 154 milligrams per cent.

SUMMARY

A case of agranulocytosis occurring during promazine therapy is reported. The diagnosis was documented by a bone marrow examination, and serial examinations of the peripheral blood. The granulocytic elements alone were affected, and recovery was prompt following antibiotic therapy and withdrawal of promazine. A transient glycosuria was observed during the acute episode of illness. Patients on long term promazine therapy should be closely observed for early symptoms of agranulocytosis and leukopenia.

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More Research in Cosmetic Field

As cosmetics leave the "realm of luxury" and become items of necessity, more and better research into the fundamental properties of the skin also becomes a necessity, according to a Federal Food and Drug Administration official. Dr. Arnold J. Lehman, chief of the FDA division of pharmacology, Washington, D.C., said the increasing demand for cosmetics has led to the new use of many known substances and the development and extensive manufacture of new synthetic compounds. He made his statements in a guest editorial in the May 25 Journal of the American Medical Association.

Unfortunately, carefully controlled research into the fundamental principles of skin properties and mechanisms and the actions of various chemicals and drugs on the skin has "not kept pace" with the many new products and the claims made on their behalf. Certain unobjectionable claims have been advanced for the effectiveness of certain preparations for reducing skin dryness and hiding skin blemishes and wrinkles.

However, in recent years the trend has been to advertise such products as being more than just cosmetics—that they serve as "skin foods, rejuvenators or tonics," "contour creams" for bust development or bust reducing, wrinkle eradicators, and "deep pore" cleansers. "To date, however, no conclusive evidence has been offered in support of many of these claims." "For example, there is nothing known to science that will restore color to hair or cure early male baldness."

Along with this recent trend, a number of biologically active substances, such as vitamins and hormones, have been incorporated into cosmetic preparations. The claims for these preparations "subtly hint" at their therapeutic value without actually saying so. For instance, vitamin A supposedly enhances the appearance of the skin. Actually, however, there is no well-substantiated scientific account to support the contention that cosmetics containing vitamin A are of greater value than those lacking it.

The actual value of vitamins, hormones, and other chemicals in cosmetics is not the only question and problem. There is also a question of safety—what potential harm may follow the indiscriminate inclusion of similarly potent chemicals in cosmetics.

"The need for increasing the scope and number of investigations relating to the fundamental problems of skin physiology, biochemistry, pharmacology, and toxicology cannot be stressed too strongly."

Clinicopathological Conferences

Of The Medical College of Virginia Hospital

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Case 194(A-8749)

A 15 DAY OLD, white, male infant was admitted to MCV Hospital on October 14, 1955, because of vomiting and abdominal distention. The infant, the fifth child of healthy parents, had been born in another hospital by normal spontaneous delivery on September 28, 1955. Birth weight was 6 lbs., 10 oz., and the general appearance was normal except for a supernumerary thumb on the right hand. Slight jaundice was evident the first two days of life, but this disappeared. The child was discharged home on September 30 on a Similac formula, but never took his formula well. The parents stated that he never took over 1/2 oz. at a feeding. A change in formula gave no better results. Bowel movements had never been normal, never more than a teaspoonful of dark semi-solid material at a time. On the day prior to admission, the patient took his 9 o'clock feeding poorly and nothing thereafter. He was seen in the Emergency Room, given a clysis, started on oral electrolyte mixture, and referred to the Pediatric Clinic. However, the child repeatedly vomited the electrolyte mixture and was brought back to the Emergency Room on the day of admission. The abdomen was found to be distended and the child was having grunting respiration. The saline enemas and an oil retention enema were administered with very poor results, and the child was then admitted to the hospital. The history was otherwise essentially negative.

Physical Examination: T. 99, P. 120, R. 50. Weight 5 lbs., 15 oz. The child was small, well developed, but poorly nourished, with a markedly distended abdomen and grunting respirations. Veins over the abdomen were prominent. Bowel sounds were very good and visible peristaltic movements could be seen on the abdominal wall. No masses could be palpated. Rectal examination revealed a tight sphincter and thick, sticky, dark brown feces. No masses were palpated. Physical examination was otherwise essentially negative.

Laboratory Data: Hematocrit 57%, Hemoglobin 19.5 grams, RBC 5,840,000, WBC 9,600, polys 66, lymphs 33, monos 1. Sodium 142, chlorides 105, potassium 5.3, CO_2 18 mEq/L, respectively. Bleeding and clotting times were normal. Flat and upright abdominal films showed a dilated gas-filled stomach and loops of small bowel with no gas seen in the colon or rectum.

Following surgical consultation, the child was typed and cross-matched and given intravenous fluids and whole blood through an ankle vein cutdown. Crysticillin and streptomycin were also begun. Laparotomy was then performed.

CLINICAL DISCUSSION

DR. J. M. HARRISON*: In summary this is a case of a 15 day old white male infant who was admitted to the hospital with clinical picture of low small bowel or large bowel obstruction. The problem therefore is one of the differential diagnosis of intestinal obstruction during the neonatal period. It is important to emphasize at this point, however, that it would be fallacy for one to assume that he could positively establish the correct preoperative diagnosis in such a case. The problem to the attending surgeon hence is one of a decision on his part as to whether or not surgery in this instance is indicated. In this patient there are certain features, both in the history, physical examination and radiological findings which make several diagnoses more tenable than others. In an attempt to arrive at the most likely diagnosis, one must first establish whether the obstruction in this instance was mechanical, paralytic secondary to inflammatory diseases of the abdominal cavity, paralytic secondary to a deficiency of the nerve cells of the intestinal tract, or some combination of these types. In order

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to decide which of these was present, one must review the conditions which fall under each of these categories and decide which of these is most nearly compatible with the case for discussion.

Let us first consider the category of a pure paralytic type of ileus secondary to inflammatory disease in the peritoneal cavity in order to eliminate this category as a very likely possibility. The features of this case which are not compatible with this category of obstruction are as follows: First, the infant does not present the clinical picture of sepsis and infection as evidenced by a normal white blood count and differential, and a normal temperature; second, his abdomen is not described as spastic or particularly tense as one would expect with intraperitoneal infection, the peristaltic sounds are quite active in contrast to the diminished or absent bowel sounds that one would expect had intraperitoneal infection been present; third, the x-rays showed only air in the small bowel and none in the large bowel as would have been present had a paralytic ileus been present; fourth, the usual conditions which produce intraperitoneal inflammation, such as appendicitis, diverticulitis, cholecystitis, etc., are extremely rare in an infant of this age. The more common conditions which could give peritonitis in an infant of his age, such as perforated ulcers, spontaneous perforation of the bowel and others are unlikely on the basis of the absence of free air under the diaphragm on x-ray. It would seem therefore that this category of obstruction can be dismissed as a very likely possibility.

This brings us to our second category of obstruction, that of pure mechanical obstruction. Time does not permit consideration of all of the conditions which fall into this category. In view of the fact that this infant is 15 days of age consideration will be given only to congenital abnormalities of the gastro-intestinal tract. Congenital atresia must always be considered in any infant with intestinal obstruction but can quickly be discarded in this case in as much as atresia by definition implies complete intestinal obstruction, and it would hardly be likely that an infant could survive for 15 days with an atresia unless some attempt had been made to surgically correct or medically compensate for his condition. Incarcerated external hernias must also be considered; however, no mention is made in the protocol of such an abdominal physical finding and for this reason we can exclude this diagnosis. Incarcerated internal hernia is a diagnosis which cannot be so easily discarded and is a possibility in this infant. I would think, however, that such a diagnosis is unlikely in as much as this infant's illness has been progressive since birth and there has been no acute crisis to suggest a sudden incarceration of the bowel. Had such a condition existed I would have expected that the history would have been one indicating that the infant had done well during the first four to five days or more of life, and suddenly had developed vomiting and abdominal distention from incarcerated bowel. The absence of this type of history, I believe, is equally against the probability of a mechanical small bowel obstruction from a congenital band.

Congenital stenosis or diaphragm of the small bowel is a definite possibility here and cannot be so easily ruled out. Such a condition can produce a picture of chronic progressive incomplete small bowel obstruction as this patient had, it could produce the abdominal physical findings of a distended but nonspastic abdomen with active peristalsis and it could have produced x-ray findings somewhat similar to those found in this case. There are other features, however, which are against this diagnosis and which I believe are more important than those just described which might favor such a diagnosis. First, the most common location for congenital stenosis of the gastro-intestinal tract is in the duodenum and certainly both from the history and x-ray findings there is no evidence in this patient of duodenal obstruction. Were stenosis present in this case, it would have to lie in a relatively uncommon site, namely in the distal small bowel or even in the colon where the instance of true stenosis or congenital diaphragm is extremely rare. Had this patient had a congenital stenosis or diaphragm of the ileum, there should have been some indication in the history that the patient had passed milk curds in the stools or at least had not continued to have the black sticky tenaceous stools that were described by his parents. Second, had a stenosis been present one would have expected to find some air in the large bowel distal to the area of stenosis indicative of an incomplete type of obstruction. With these thoughts in mind, although congenital stenosis or diaphragm of the distal small bowel is a possibility, I believe such a diagnosis is a lesser possibility than certain other conditions which will be mentioned shortly.

Malrotation of the colon is another possibility which must be considered in this case. This condition occurs predominantly in the first month of life and presents itself clinically as a picture either of duodenal obstruction by congenital bands which

pass over the duodenum or by volvulus of the midgut around the superior mesenteric vessels as an axis, or a combination of both. Had a malrotation been present, one must consider whether the clinical picture of this case could be compatible with either of the above two conditions. As regards duodenal obstruction associated with a malrotation, such a diagnosis seems very unlikely in the absence of a history of vomiting and in the presence of these x-rays which are certainly not compatible with duodenal obstruction. So far as volvulus of the midgut is concerned one must consider whether the case in question could be compatible with an early midgut volvulus or a late midgut volvulus. As regards early midgut volvulus characteristically one would not expect to find much air in the small bowel on x-ray due to the fact that as the small bowel becomes twisted around the superior mesenteric vessels air from the stomach and duodenum does not have an opportunity to enter into the twisted segment of bowel. On the basis of these x-rays which show a rather large amount of air well down in the small bowel, I believe we can rule out early midgut volvulus as a very likely possibility. This would imply that if this patient had a midgut volvulus from malrotation of the colon it probably would have to be a late volvulus of the midgut where air in the twisted segment of small bowel was due predominantly to bacterial decomposition. This is a process which takes considerable time to develop, and had it been present one would have expected impairment of the circulation of the involved bowel with a resultant clinical picture of sepsis, vascular collapse and hypoactive or absent bowel sounds, none of which are noted in the protocol of this case. A barium enema would have been of aid in ruling out malrotation but I understand no barium enema was done. Because of these thoughts I will discard malrotation of the colon as a very likely possibility.

Duplication of the bowel is another condition which cannot positively be excluded in as much as a reduplicated segment of bowel may become overdistended and compress the adjacent bowel and produce the clinical picture of intestinal obstruction. Had a mass been palpable abdominally or rectally on this patient, this diagnosis would have to be more seriously entertained. With the absence of such a mass, however, I am going to discard this as a likely diagnosis, realizing of course that the absence of a mass by no means absolutely excludes this possibility.

Intussusception I mention simply to exclude it because of the absence of colicky pains, palpable mass and rectal bleeding.

This brings us to the last group of cases to discuss, namely, meconium ileus, the meconium plug syndrome and the category of neurogenic ileus secondary to an absence of ganglion cells in a part or a whole of the gastro-intestinal tract. True meconium ileus is extremely unlikely in an infant 15 days old, because the majority of infants with true meconium ileus as a part of the picture of mucoviscidosis develop signs and symptoms of intestinal obstruction in the first two to three days of life and if unrelieved have persistent vomiting with a rapid progressive down-hill course leading to death. There is, however, a recognized clinical entity known as the meconium plug syndrome which is not associated with pancreatic fibrosis and mucoviscidosis and which may produce a clinical picture of progressive low grade low small bowel or large bowel obstruction which could be compatible with the clinical picture that this baby presented. Whenever an infant has findings that are compatible with this syndrome one must always consider the possibility of an underlying neurogenic defect of the bowel either in a local segment of the colon, the whole colon, or perhaps the whole gastro-intestinal tract which renders the bowel incapable of evacuating itself entirely of its normal meconium and fecal contents, and eventually produces a picture of physiological intestinal obstruction above the aganglionic segment of bowel.

The outstanding features in this particular patient which strongly suggest a neurogenic disturbance of the bowel or Hirschsprung's disease as a possibility are the fact that this patient has had increasing difficulty with eating since the time of birth, he has had progressive abdominal distention, and his bowel movements at no time have contained milk curds and have always been described as thick, gummy dark and sticky in nature strongly suggesting incomplete evacuation of the colon since birth. When one entertains such a diagnosis one must speculate as to whether there is a limited segment of bowel which has a congenital absence of ganglion cells or whether the entire colon or entire gastro-intestinal tract lacks ganglion cells. In this case the possibility is suspected that there is not only a local segment of colon wherein the ganglion cells are absent, but perhaps also they are absent in the entire colon. This latter variety of Hirschsprung's disease is suggested by the fact that no abdominal mass is palpable, no air is present in the colon on x-ray, the rectum is not empty and no stricture is palpable at the tip of the rectal exam-

ining finger, all of which features one would hope to find in a local Hirschsprung's disease of the recto-sigmoid.

In summary my first diagnosis in this case is intestinal obstruction from a meconium plug type of syndrome secondary to Hirschsprung's disease of the colon. If this is incorrect, my second diagnosis would be congenital stenosis or diaphragm of the lower ileum.

Dr. J. M. Harrison's Diagnosis

Hirschsprung's disease of the colon

Pathological Diagnosis

Congenital megacolon (Hirschsprung's disease)

Acute ulceration of the stomach, small and large intestines

Bronchopneumonia, minimal

DISCUSSION OF PATHOLOGICAL FINDINGS

Dr. Gordon Hennigar*: At operation the surgeon found all the small and large intestines to be distended. An area of the jejunum was found to be discolored and several extremely thin spots were present in the wall of jejunum. A small amount of fibrinous exudate was noted on the peritoneal surface. Approximately six inches of the diseased jejunum was resected and an end-to-end anastomosis and a jejunostomy were performed. Subsequently the patient developed a cardiac arrest and cardiac massage was done through a thoracotomy incision. Following this procedure, the patient had difficulty resuming respirations on his own and finally expired a few hours after the operation.

The body at autopsy weighed 2750 gm. and appeared to be poorly nourished. The abdomen was slightly distended. On entering the peritoneal cavity there was sanguineous fluid measuring about 30 cc. in volume. The peritoneal surfaces were reddened and were covered with fibrinous exudate. The jejunojejunostomy and the jejunostomy were intact. The entire small and large bowel appeared to be dilated and the wall was edematous. The stomach was not dilated and the gastric mucosa showed some edema and several, small, superficial ulcers measuring up to 1 cm. in diameter. The mucosa of the small and large bowel was edematous, hyperemic and also showed numerous shallow ulcers which were covered with fibrinous exudate. The colon was filled with soft, light green feces. At approximately 7 cm. from the anus the dilatation of the colon ended rather abruptly (Fig. 1). Histologic sections through the dilated portion of the colon revealed slight hypertrophy of the muscularis and the presence of the ganglion cells in the myenteric plexi, whereas numerous sections through the narrow segment of the recto-sigmoid failed to reveal any Auerbach's or Meissner's plexi, though nerve fibers which are thought to be sympathetic in origin and interstitial cells were present (Fig. 2 & 3). The absence of intramural ganglion cells is congenital and interpreted as the principal lesion in Hirschsprung's disease, and absence of peristaltic movement is its functional manifestation. According to the physiologic observations made by Swenson and his co-workers there were found strong peristaltic waves in the dilated and hypertrophied colon, but the peristalsis did not enter the narrow distal segment, which exhibited increased tonus. In more than 90 per cent of cases of Hirschsprung's disease, the narrow, aganglionic segment is confined to the rectum and part or all of the sigmoid colon. Occasionally the dilated portion, besides involving the whole colon, extends for a variable distance along the small in-



Fig. 1—Congenital megacolon (Hirschsprung's disease) showing markedly dilated small and large bowel with distal narrow segment in the recto-sigmoid. Arrows point to some of the acute ulcers found in the mucosa of dilated bowel.

*Professor of Pathology, State University of New York College of Medicine at New York City.

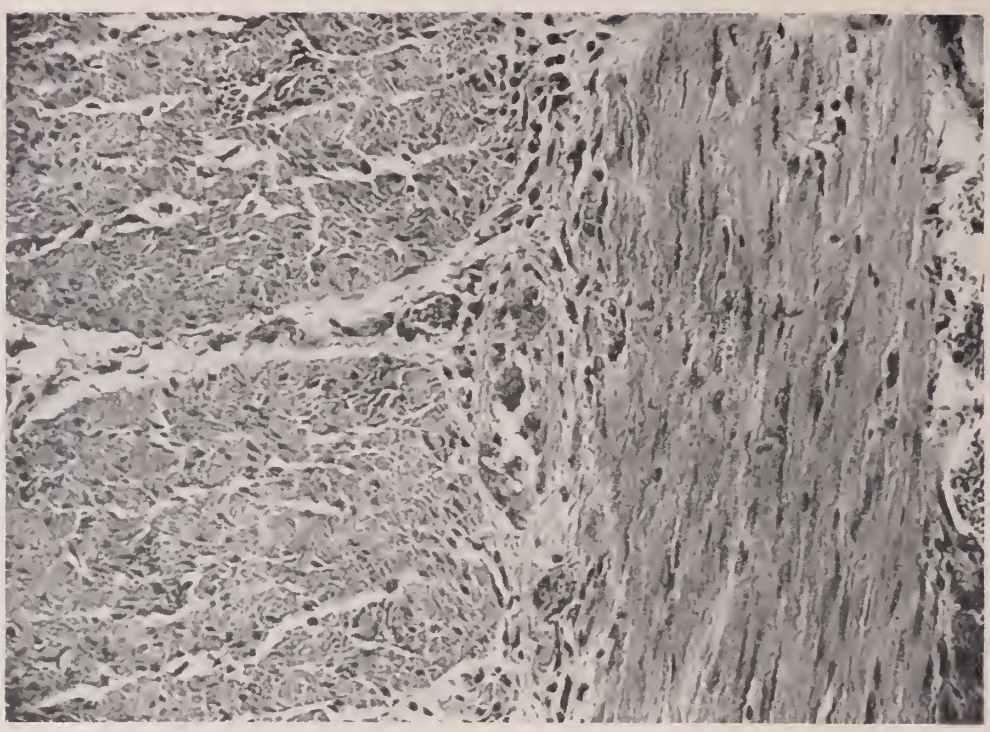


Fig. 2—Photomicrograph of the dilated portion of colon showing ganglion cells in the myenteric plexus.

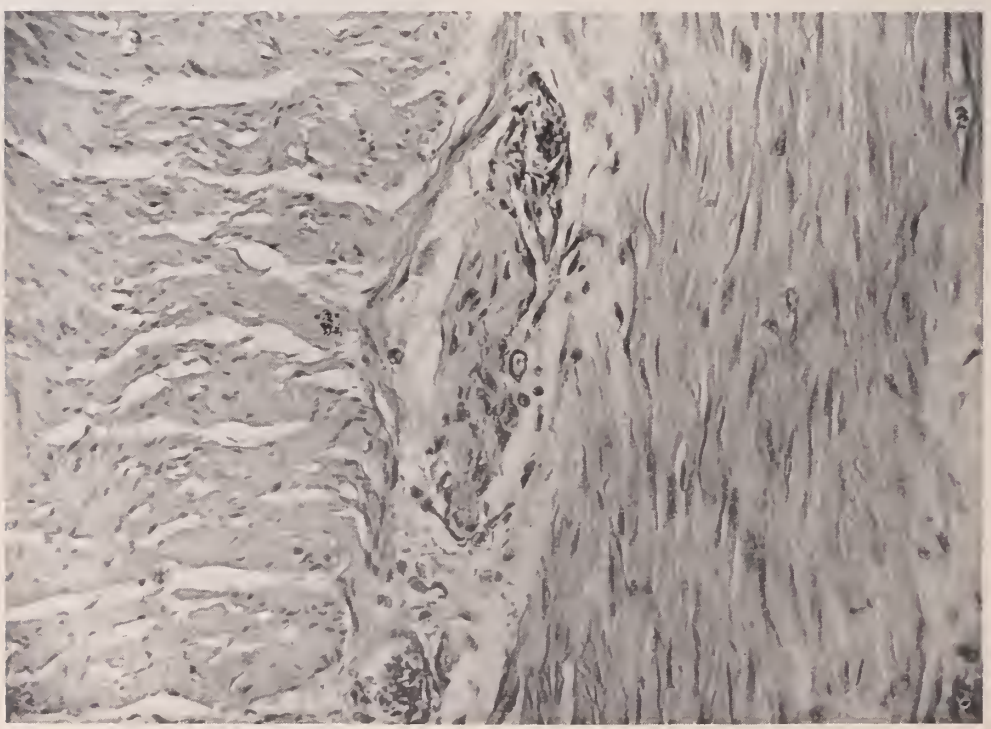


Fig. 3—Photomicrograph of the narrow segment showing non-myelinated nerve fibers but no ganglion cells in the myenteric plexus.

testine. Rarely the narrowed segment is in the middle of the large bowel, in which case the segment proximal to it is dilated and that distal to it is normal.

The pathogenesis of the multiple acute ulcers of the gastro-intestinal mucosa in this case is not entirely clear, but it is probably related to the marked dilatation of the intestinal tract, stasis of its fecal content and terminal shock in which cardiac arrest occurred following surgery.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

The following article was prepared at my request; that is, I asked Mr. Whitehall if he would write something for this page of the Monthly, but the subject matter was left entirely up to him.

Albert V. Whitehall serves the Life Insurance Association of America as its Associate Director of Health Insurance; he is also Vice-Chairman of the Health Insurance Council. An astute analyst of the complexly interrelated factors now influencing the trends of medical economics, Mr. Whitehall has a standing invitation to help this special page fulfill its purpose of presenting to the physicians of Virginia worthwhile information and observations about the prepayment mechanism of meeting medical-economic needs and problems.

Now that the Richmond Blue Shield Plan is calling upon the physicians of the State to assist in the revision of its Standard Contract Fee Schedule (see page 427), the subject matter Mr. Whitehall chose to write about is fortuitously timely and appropriate.

RJA.

Professional Fees and Insurance

ALBERT V. WHITEHALL

What are the general attitudes of the insurance industry toward fee schedules in the medical profession? In a single sentence, we would answer: "The manner in which physicians' fees are determined is and should be completely under the jurisdiction of the physicians themselves."

Fees are an important part of the doctor-patient relationship, and thus have an important effect on the public relations of the medical profession. Insurance is only a device to help the doctor and the patient to get together.

Insurers and their policyholders have a direct interest, obviously, in the fees or charges that physicians establish. When professional fees are not clearly understood, it becomes very difficult for insurance to provide its most effective service to the medical profession and the public.

Insurance actuaries must predict premiums with reasonable expectation that they will be adequate to pay claims. If claim costs go up severely, then the insurance companies must increase premiums and explain to the policyholders where and why the extra money went.

Uncertainty as to fees can cause trouble for the doctor too. People who are not aware of the level of professional fees are apt to buy insurance benefits inadequate to their needs. If there is not a reasonable relationship between the doctor's fee and the insurance payment for a given procedure, whatever the reason, someone may have to explain the discrepancy to a disgruntled patient. Such episodes are hardly conducive to good public relations for the voluntary system, for medicine, or for insurance.

The attitude of thoughtful insurance leaders has been well expressed, I think, in a report that was issued two years ago by the Joint Committee on Health Insurance. In establishing this committee, the insurance industry had undertaken some self-evaluation to study whether it was measuring up to the challenge of providing health insurance effectively. Please note, in the following paragraphs from the report, the sincere respect of the insurance men for the medical profession, their desire to cooperate, and the careful, thoughtful approach to a perplexing problem:

> "When charges for medical service are based upon ability to pay, the practice of considering that insurance increases the patient's ability to pay, can interfere seriously with the effectiveness of insurance.
>
> "In the extreme case, that practice can completely destroy the effectiveness of insurance, in that the insured derives no benefit from the existence of insurance. In less extreme cases, it means that the insured does not get full value from the insurance which he has been so prudent as to arrange.
>
> "Physicians and insurers alike are recognizing that a practice of charging higher fees when the patient is insured can destroy the motivation to buy insurance and thus defeat the teamwork between the medical profession and insurers in providing and financing medical care. Such a practice, when it exists, is a clear example of a claim cost which is inadequately 'controlled' and which, therefore, is correspondingly difficult to insure effectively, or which leads to an increase in the

total costs to be met out of the premiums paid by all policyholders.

"A number of leading physicians have suggested fee schedules as a means of providing an objective price scale to which a family can fit its insurance program. * * * Insurance men should be willing, when invited, to discuss such questions with doctors and to cooperate in any studies and developments.

"Various types of fee schedules are being studied by several medical societies, in some cases with the cooperation of the Health Insurance Council. The Subcommittee welcomes those studies and expects that they will lead to constructive developments. Some members of the Subcommittee, however, questioned whether in the long run the answer will be found in formal fee schedules.

"The objective, from the viewpoint of permitting insurance to work most effectively, is the determination of charges without regard for the existence of insurance, so that each family could have an advance understanding of the 'price scale' of its medical services and thereby be enabled to arrange insurance consistent with that price scale, with assurance that it will derive benefit from the existence of such insurance. Some members tend to the opinion that in the long run that objective will be approached without the need of formal fee schedules."

To sum up: clearly established, well understood fee practices would help insurance to do a better job for patients and doctors. But insurance can only cooperate, it may not take the lead. The medical profession makes its arrangements on fees with the general public.

All of us in the voluntary system, in the long run, are dependent upon public approval. To the extent that we are guided by the concept of service to the public, we shall grow and prosper. Indeed, the very survival of the voluntary system of medicine and health insurance depends on the continued support of the general public, and its approval of the way we render service.

Medical Economics Offers New Awards

The 1957 Medical Economics Awards have just been announced by *Medical Economics*, the national business magazine for physicians. Top award of $500 will go to the physician submitting the best original article during the year. Awards ranging from $300 to $100 will be made for other original articles written by physicians and accepted for publication. And this year, for the first time, awards of up to $50 will be made for article *ideas* submitted by physicians and found suitable for development by *Medical Economics*' staff.

A full article will have the best chance of winning if it's "limited to just one aspect of any broad subject in our field—fees, for example, or practice management, or even medical humor." It should be between 1,000 and 3,000 words long and "filled with examples, anecdotes, and cases in point drawn from actual experience."

An article idea will have the best chance of winning if it's "specific rather than general and . . . detailed enough so that the editors will understand exactly the economic, professional, or personal problem you have in mind." Between 100 and 300 words are preferred for article ideas.

Entries must be postmarked no later than December 31, 1957, and adressed to: Awards Editor, Medical Economics, Oradell, N. J. Manuscripts should be accompanied by a self-addressed envelope and return postage.

Mental Health . . .

The Role of the Chaplain in a Mental Hospital

RICHARD W. McKAY

The patient was a 69 year old white female, single, and was interviewed by the Chaplain at the suggestion of her physician in order to clarify some of her religious conceptions and expressions. At the time of the interview the patient had been in the hospital three years. On admission she claimed that the Lord was talking to her and felt that the devil was punishing her. Three years after admission, this patient was still reading the Bible, studying about the spirits and tried to explain what she meant by the Lord speaking to her, by saying that it was not a voice which she heard but her conscience. The patient received seven electro-convulsive treatments, several months after her admission to the hospital and other than this received no further treatment.

The function of the Chaplain in this case was to determine, if he could, whether the patient's reference to hearing the voice of God and the devil were hallucinatory experiences or the patient's method of describing her spiritual experiences in relationship to her culture. In conversation with the Chaplain the patient denied ever having heard God's voice or the devil's, stating that this appeared in one's conscience, and clarified this by saying "God doesn't speak to one like another person would." The patient's basic philosophy of life was that the Spirit of God promoted in one quietness and peacefulness, patience, and an absence of fear, doubt, and worry. On the other hand the spirit of the devil promoted restlessness, doubt and worry. In this particular case the Chaplain felt that the patient was not hallucinated at the time of the interview. The problem here was one of communication. The patient had been reared in a rural community where Biblical matters are taken rather literally and all thoughts and ideas which are considered evil or bad are attributed to the devil and all thoughts which are considered by the person to be good and upright are attributed to God. The physician in this case agreed with the Chaplain that the patient was not experiencing hallucinations and that the basis for understanding the patient's verbalization was in gaining an understanding of her means of communicating her ideas. In this way the Chaplain collaborated and cooperated with the attending physician in helping to establish a diagnosis.

In addition to the above method cooperation the Chaplain also interviews newly admitted patients for a brief initial religious interview. Results of this interview are recorded and placed in the patient's chart to be used by the physician and other staff members in evaluating the mental condition of the particular patient. In addition, a questionnaire is sent to all correspondents of patients to obtain information relative to the religious background. From the questionnaire and interview combined the Chaplain makes an evaluation of the place of religion in the patient's life. If the patient has been a member of a church it is important to know to which he belongs since different denominations require varying beliefs in their members. Belief influences both thought and action and knowing the beliefs will sometimes furnish a lead in understanding a severely repressed person. In the initial religious interview an attempt is made to discover whether there has been any significant change in the religious life of the person during recent months. Often a sudden or abrupt change in one's religious thinking accompanies onset of mental disorder. This knowledge assists the staff in determining, somewhat, the time of onset and sometimes furnishes additional symptomatology for evaluation.

One case is recalled in which the patient in conversation with the doctor refrained entirely from mentioning any of her paranoid ideation but instead talked about her religious conflicts. After the patient was referred to the Chaplain, by the physician, she consistently during several interviews brought out her paranoid ideas. In conference with the doctor she would deny all ideas of reference or would insist that her problems were religious. In conversation with the Chaplain the reverse was true. By cooperation and interchange of interview material, the physician and Chaplain were able to come to a better understanding of the patient's condition and to properly evaluate her disorder.

The Chaplain is present at all diagnostic staff meetings and at those in which disposition is the question. Along with the other staff members he is encouraged to contribute anything he has learned about the patient that might be of help in evaluating the patient's condition for purposes of diagnosis.

RICHARD W. McKAY, *Chaplain, Southwestern State Hospital, Marion, Virginia.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

At the same time he is encouraged to help evaluate the possibilities of the patient returning to the community or leaving hospital. Here the Chaplain does not become another type of Social Worker but instead evaluation is made on the basis of the patient's religious ideation, his beliefs and ability to socialize, viewed from a religious standpoint.

As a result of one of the initial religious interviews, and because the patient's doctor had encouraged him to discuss this problem with the Chaplain, one man requested an interview, stating that he was unable to pray. The patient stated that he had been a member of a church for some time and had prior to his admission to hospital been able to pray without any difficulty. However, with the onset of his illness he seemed no longer able to communicate with God in prayer. Sensing that the cause for this was a part of the general symptomatology of the patient's possible psychoneurosis, the Chaplain began psychotherapy with him. The patient's self-evaluation was one of utter worthlessness. He was burdened with feelings of guilt about his past deeds for which he could not receive satisfactory forgiveness in prayer. He was very anxious, had been unable to adjust to his wife, had even talked of divorce, and prior to admission had been unable to sleep, had become very indifferent and unable to work. After the eighteenth interview with this patient he stated that he was beginning to understand himself a little better and was now able to pray and to feel a certain amount of satisfaction from this. At the time of writing the patient is still undergoing psychotherapy. No attempt has been made or will be made to convince the patient during psychotherapy that he should appropriate the beliefs of the Chaplain for his own. The goal of psychotherapy in this case is the goal of any psychotherapy, that the patient will become more emotionally mature and will be free of symptoms, developing a fair understanding of himself and of his defenses, being able to adjust in his community in a way that it is healthy for him. If, in the process, the patient's religious ideas are aired and he is able to integrate more mature and healthy religious ideas into his emotionality this would be to his credit. However, no direct attempt is made to force any religious belief upon the patient. This would cease to be therapy and become useless advice.

At a recent meeting of the Association of Mental Hospital Chaplains, considerable time was spent discussing whether or not the Chaplain could be Chaplain and therapist at the same time. Some psychiatrists and Chaplains feel that at the point where the Chaplain begins to be therapist he ceases to be a clergyman, and that to be a therapist and a Chaplain at the same time is practically impossible. This view is usually held by the psychiatrist who would reserve exclusively for psychiatry, all psychotherapy, and by the Chaplain who would assume that he could never become nonjudgmental and permissive enough to be a therapist. However, it would seem that it is still possible not only for a Chaplain, but for others who engage in therapy with those suffering from mental disorders, to utilize all that is offered by psychotherapy as a method of assisting the patient to recover from, and to readjust whatever personality, environmental, or familial conflicts have led to his disorder.

The Chaplain also conducts worship services for patients each Sunday and group worship periods on various continuous care wards. The goal of worship in a mental hospital is the same as elsewhere, namely, to give opportunity for establishing a relationship of love with God, with himself and with his fellows. The word love as used here is the same as the Greek word used in the New Testament, *agape*. It denotes reverence, goodwill, esteem and worthiness. In this context religion may be anxiety creating, but it also offers means of handling anxiety by increasing feelings of security, reducing guilt feelings, and by reinforcing or reactivating faith and hope.

In the last thirty years psychiatry and mental hospitals, as well as many general hospitals, have opened their ranks to admit representatives of the three major religious faiths in our country. Where Chaplains have been properly trained, they have found in most cases a willingness on the part of the therapeutic team to work with them. In the case of the writer there has been more than a willingness to cooperate, there has been a desire to collaborate, to labor together, each using his own particular training to bring about not only better care and treatment, but a speedier recovery rate, because of a genuine interest in the total wellbeing of the patient.

It has been said by some that religion and psychiatry grow closer together year by year. The writer believes that this is not true. Religion and psychiatry are not drawing closer together. Instead each is becoming more aware of what the other has to offer. If they seem to draw closer together, it is only because they seek a common goal, the wholeness of the individual, using sometimes different, sometimes similar, avenues of approach in attaining this goal.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Influenza Far East '57

During the past few weeks there have been reports of epidemics of influenza in the Far East appearing in the press and in reports and letters from the National Office of Vital Statistics and Regional Offices of the Public Health Service. The disease was first seen in Hong Kong and Singapore. Then in rapid succession, almost simultaneous epidemics have occurred in Taiwan, the Philippines, the Malayan States, Indonesia, Japan, and India.

The clinical description is typical of the influenza seen in recent years; rapid onset, fever malaise, muscle aches, and coryza. The duration is from three to five days. The attack rates have been high, 18% in the Philippines, but the mortality rates have been less than 1 per 1,000 cases and these deaths were usually in infants and in debilitated persons.

The presence of American military laboratories located near the epidemic areas permitted study of the epidemiology of this disease and allowed comparisons to be made between various population groups. Viruses were isolated from throat washings and these were found to be of unusual types. A new antigenic variant of Type A influenza virus has now appeared which is strikingly different from any previous isolates. Intensive studies of the characteristics of these viruses are now being made.

The incidence of influenza has been somewhat greater this spring in the United States than has been experienced for the last six years. The virus causing the disease was Type A and related antigenically to the group that has been prevalent since 1947. The Far East type is new.

It is likely that the virus of the Far East '57 influenza will be introduced into the United States this summer. All medical personnel should realize that there will be need for rapid investigation and laboratory diagnosis of acute respiratory diseases that resemble influenza. The accurate diagnosis of cases is imperative. Attempts should be made to isolate virus from throat washings of patients when the possibility of influenza exists. The washings should be obtained during the first three days of illness and while the patient is still febrile, although the virus may be recovered as long as seven days after the onset. The patient should gargle three times using 15 c.c. of broth, skimmed milk, or distilled water for each washing and return the washings to a paper cup. Some infective material may be brought from the trachea into the pharynx if the patient will cough. The washings should be transferred to a closed tube for transportation. They should be frozen and shipped packed with a sufficient quantity of dry ice to be kept frozen. Serum samples should also be taken, one during the time of illness and a second two to four weeks later. The throat washings and the first serum sample can be shipped frozen and sent at the same time. The convalescent serum can be sent later. They should be sent to Dr. Keith Jensen, Influenza Center, C.D.C. P.O. Box 61, Montgomery, Alabama. A history of the case should be sent with the specimens and the laboratory of the State Department of Health should be notified that they have been sent.

At a meeting called recently in Washington by the Surgeon General of the Public Health Service, it was brought out that prototype strains were sent to vaccine manufacturers on May 22 and that all necessary preparations are being made for inclusion of the Far East '57 strain in a new formula influenza vaccine. The Department of Defense has indicated that this vaccine will probably be used among its personnel this autumn. It is likely that the manufacturers will institute production of the new variant strain immediately and that the new formula vaccine will be available in the late summer. It is probable, however, that the vaccine will not be available to the public until in October. It has been decided that because the Far East '57 influenza is a type with which there has been no previous experience, there should be two doses of vaccine given, the initial dose of 1 c.c. to be followed in four to six weeks by a second dose of 1 c.c.

Foreign quarantine inspectors, which the Public Health Service stations at all international sea and airports, are advising travelers from the Orient to

see their private physicians if they develop a respiratory illness within ten days after their arrival. The names and addresses of passengers who have a respiratory illness on arrival are being forwarded to health directors in the communities to which the travelers are going. Private physicians should immediately report suspicious cases to their health departments, which link with the State-Federal-International reporting system, so that any occurrence of suspected influenza may be quickly investigated and the necessary measures for laboratory diagnosis can be instituted. As new developments occur, the medical profession will be kept informed through appropriate medical channels.

Monthly Report of Bureau of Communicable Disease

	June 1957	June 1956	Jan.-June 1957	Jan.-June 1956
Brucellosis	2	4	12	11
Diphtheria	3	0	8	21
Hepatitis (Infectious)	39	34	268	287
Measles	900	3599	4326	22444
Meningococcal Infections	7	7	41	53
Meningitis (Other)	24	15	100	65
Poliomyelitis	5	13	17	19
Rabies (In Animals)	26	17	177	197
Rocky Mt. Spotted Fever	14	8	16	13
Streptococcal Infections	474	488	4243	3716
Tularemia	2	6	19	12
Typhoid Fever	4	8	21	22

Film Describes Role of Radiologist on Medical Team

A new color motion picture dedicated to the radiologist—a physician who specializes in the use of x-rays, radium and radioactive materials in the diagnosis and treatment of diseases—has been added to AMA's Film Library. "First A Physician" tells the dramatic story of what a radiologist is, what he does and how he serves patients. In this 27-minute film, you'll see the warm, human story of the home and professional life of William Phillips, M.D. You'll learn about the many ways the radiologist uses x-ray in diagnosis and therapy. You'll watch the doctor apply his special knowledge to meet critical situations. The film was produced by E. I. du Pont de Nemours & Co., Inc. in cooperation with the American College of Radiology.

Medical societies may arrange for bookings through the Film Library. The film will be particularly suitable for school, club and other public gatherings.

Periodic Health Appraisal of Children

A new program endorsing periodic health appraisal for children sponsored by the National Congress of Parents and Teachers has won support of the AMA's Council on Medical Service. At a recent meeting, the Council voted to approve the following resolution: "The Committee on Maternal and Child Care of the Council on Medical Service, AMA, reaffirms its approval of the principle of continuous health supervision of children from birth through their school experience rather than only a program of a single appraisal on school entrance. It also recommends that, where possible, this should be done by the physician and dentist who normally serve that child and family, preferably his personal physician and dentist. The Committee welcomes the support of the National Congress of Parents and Teachers."

The Medical Society of Virginia . . . .

Council Minutes

A special meeting of the Council of The Medical Society of Virginia was called to order by Dr. James D. Hagood, President, on June 20, 1957, at Society Headquarters. A quorum was present. Attending were Dr. James D. Hagood, Dr. Harry C. Bates, Jr., Dr. James P. King, Dr. Harry J. Warthen, Jr., Dr. Mack I. Shanholtz, Dr. A. A. Creecy, Dr. Walter P. Adams, Dr. Benjamin W. Rawles, Jr., Dr. Harold W. Miller, Dr. Fletcher J. Wright, Jr., Dr. Louis P. Bailey and Dr. James P. Williams. Also attending were Dr. W. Linwood Ball, Society Headquarters Building Committee, Dr. W. C. Caudill, Chairman of the Legislative Committee, Mr. Robert C. Duval, Jr., Attorney for The Medical Society of Virginia and Mr. Marcellus Wright, Jr., Architect.

Three possible plans for the Society's new headquarters building were inspected by Council and Mr. Wright brought everyone up-to-date with a report which covered the steps taken by the Headquarters Building Committee. He reported that the third and latest set of plans had been approved by the architectural consultant to the Windsor Farms Board of Directors and that formal approval by the Board would doubtless be obtained at its next meeting. The plans contain those features which are necessary to the most efficient operation of the Society.

A question was raised concerning proper procedure from this point and Dr. Duval offered for Council consideration a resolution which would provide a definite course of action. The first section of the resolution was introduced and adopted as follows:

"Resolved by the Council of The Medical Society of Virginia as follows: 1. That the plan for the proposed headquarters building presented to the Council by Marcellus Wright & Son in tentative drawings, dated June 19, 1957, is hereby approved, provided, however, that such approval is conditioned upon obtaining from Windsor Farms, Inc., its approval of the type of building to be constructed, and is with the understanding that the completed building be of similar architectural design to that of the Tuckahoe Woman's Club."

The second section, which follows, was then considered and adopted. "2. That the Headquarters Building Committee of the Society is hereby authorized and empowered to consider and pass upon any changes in the plans which may become necessary or desirable to meet objections on the part of Windsor Farms, Inc., or of residents of Windsor Farms, and to represent and act for the Council in all such matters."

The third and last section of the resolution was then adopted in the following form: "3. That the Society Headquarters Building Committee is hereby authorized and empowered, for and on behalf of The Medical Society of Virginia, to enter into such contracts, and do whatever things may be necessary in the construction of the proposed headquarters building on the land of the Society in Windsor Farms, Richmond, Virginia, and, with the advice and counsel of the Executive Committee, to obtain the necessary furniture, equipment and supplies for the efficient operation of the said building."

Dr. Hagood introduced Dr. Caudill who discussed briefly the problem dealing with hospital-physician relationships. Dr. Caudill was particularly interested in learning whether or not Council had any objection to certain proposed minor changes in the Medical Practice Act which would clarify the status of licensed interns and residents. It was brought out that a full report on the problem, and perhaps on the study now being conducted by a Committee of the Virginia Advisory Legislative Council, would be presented to the House of Delegates in October.

Dr. Adams then read a letter from the Norfolk County Medical Society requesting that a petition of Portsmouth physicians to form a separate component society be considered favorably by the Council. Dr. Adams also presented the formal petition signed by seven Portsmouth physicians.

It was reported that ways and means had been found whereby physicians belonging to a Portsmouth Society could retain their group life insurance coverage through the Norfolk County Medical Society. This would involve dual membership.

Dr. Rawles then moved that the Society approve the petition and grant a charter to the Portsmouth Academy of Medicine or such other name as selected

by the petitioning physicians. The motion was seconded and adopted.

It was then moved by Dr. Rawles that the matter of physicians holding active membership in two or more component societies be referred to the Judicial Committee. An amendment was offered which would have the Committee review Article I of the By-Laws and make such recommendations as would seem appropriate. The motion, as amended, was seconded and adopted.

Dr. Shanholtz then asked Council to give serious thought to what future use might be made of the State's Tuberculosis Hospitals. It was brought out that many beds were vacant and that the time had come to find a proper solution to the problem. He made it clear that no definite conclusions have been reached by the State Board of Health and that he looked forward to another discussion of the problem when Council meets in October.

Considered next was a request from the Virginia Academy of General Practice that it be relieved of the responsibility of nominating candidates for the "General Practitioner of the Year" award. It was believed that the nominations would mean more if they were not sponsored by any organization. After some discussion it was moved that in the future nominations should be submitted in writing by component medical societies prior to the first meeting of the House of Delegates and that such nominations be digested and sent to members of the House before the meeting. The Speaker of the House would neither accept nominations from the floor nor permit verbal discussion. The motion was seconded and adopted.

Council was then requested to consider the advisability of bringing the cost of the three volumes of "History of Medicine in Virginia" more in line. It was brought out that the three volumes were available to members at $5.75, but cost non-members $22.50 for the complete set. The feeling prevailed that the difference involved was too much. It was then decided that henceforth members could purchase single volumes at $2.00 each or the set of three for $5.00. Non-members will be able to purchase the volumes at $4.00 each.

A question of policy was raised with reference to physicians entering residency training programs after a number of years in active practice. The office staff was not sure whether or not these physicians should be made "Courtesy" members (dues exempt) or should be required to pay dues in some form. It was brought out that the AMA requires dues of all physicians entering residency training programs after having been in practice 5 years.

It was moved that all residents be placed in the same category and offered "Courtesy" membership regardless of length of time in practice. The motion was seconded and adopted.

Dr. Williams called attention to the "Suggested Guides to Relationships Between State and County Medical Societies and the United Mine Workers of America Welfare and Retirement Fund" which were adopted by the AMA House of Delegates in New York. It was suggested that Dr. Williams incorporate these suggested guides into his Committee report in order that the Society's House of Delegates may have the opportunity to act upon them.

The question was raised by Dr. King as to what steps should now be taken with the view toward disposing of the present headquarters building. Mr. Duval advised that a definite procedure would have to be followed and that it would be necessary that the House of Delegates adopt a resolution in October authorizing sale of the property. He stated that he would give this matter his attention and have some suggestions ready for Council at its next meeting. There was some thought that the Executive Secretary might make it known to interested parties that the building is expected to be offered for sale sometime after the 1957 Annual Meeting—occupancy depending upon completion date of the new headquarters.

Dr. Rawles took notice of the excellent work being carried on by the Virginia Council on Health and Medical Care and requested that a suitable resolution of appreciation be prepared for presentation before the House of Delegates.

There being no further business, the meeting was adjourned.

Robert I. Howard
Executive Secretary-Treasurer

Woman's Auxiliary . . . .

President—Mrs. Lee S. Liggan, Irvington
President-Elect—Mrs. John R. St. George, Portsmouth
Vice-Presidents—Mrs. Maurice Bray, Suffolk
Mrs. J. Rollins McGriff, McLean
Mrs. H. H. Howze, Norton
Recording Secretary—Mrs. James R. Grinels, Richmond
Corresponding Secretary
Mrs. A. B. Gravatt, Jr., Kilmarnock
Treasurer—Mrs. Robert H. Detwiler, Arlington
Publication Chairman—Mrs. Paul Pearson, Warsaw

Alexandria.

Members of this Auxiliary served refreshments following a special capping and award ceremony of the Girl Scout Hospital Aide Troop No. 79. This Troop is made up of approximately thirty girls from the junior and senior classes of the local high schools, who have a special interest in hospital work. Several of them have contributed more than 300 hours to the Alexandria Hospital. The troop is sponsored by the Alexandria Auxiliary, with Mrs. Harold M. Shultz as leader and Mrs. James Moriarty assistant.

On June 11th, at the home of Mrs. James Gilbert, the following officers were installed: President, Mrs. Glenn Thompson; president-elect, Mrs. William Young; treasurer, Mrs. John Watson; corresponding secretary, Mrs. James Brown; and recording secretary, Mrs. John Ransmeier. Mrs. Gilbert is the outgoing president.

Northern Neck.

At the spring meeting of this Auxiliary, held on May 9th at the Indian Creek Yacht and Country Club, the following officers were installed: President, Mrs. E. T. Ames; president-elect, Mrs. M. B. Lamberth; vice-president, Mrs. Leonard Booker; recording secretary, Mrs. Paul C. Pearson; treasurer, Mrs. Norman Tingle; corresponding secretary, Mrs. Heyward Wescott.

Mrs. Lee Liggan, president of the Auxiliary to The Medical Society of Virginia, and Mrs. J. R. St. George, president-elect, were guest speakers.

Fairfax.

Mrs. C. Barrie Cook, pianist and member of this Auxiliary, played for her fellow members and guests at their meeting at the Court House Country Club on May 7th. Mrs. Cook began her studies at the age of five. She attended Converse College and was graduated in piano from Syracuse University. She was guest soloist with the Syracuse Civic Orchestra and was asked to give three concerts before the University of Virginia. She is a member of Sigma Alpha Iota, national honorary music fraternity.

Wise.

This Auxiliary met on May 1st with the new president, Mrs. George Martin, presiding. Other new officers are: vice-president, Mrs. John Dellinger; recording secretary, Mrs. Charles Swecker; corresponding secertary, Mrs. William Schmidt; and treasurer, Mrs. Gordon Shull.

A donation of $10.00 each was given to the Leigh-Hodges-Wright Memorial Fund and to the American Medical Education Foundation.

A gift of $35.00 was received from the local hospital volunteer group to be used to purchase clothing for a candidate of the nursing scholarship.

Richmond.

At the meeting of this Auxiliary on May 17th, the following officers were installed: President, Mrs. George K. Brooks, Jr.; president-elect, Mrs. William F. Grigg, Jr.; vice-president, Mrs. Richard N. Baylor; treasurer, Mrs. Wyndham B. Blanton, Jr.; corresponding secretary, Mrs. George G. Ritchie; assistant corresponding secretary, Mrs. Campbell Harris, Jr.; recording secretary, Mrs. Bernard D. Packer; historian, Mrs. Heth Owen, Jr.; and parliamentarian, Mrs. Maynard R. Emlaw. Standing Committee chairmen are: Bulletin, Mrs. James R. Grinels; Editorial, Mrs. William F. Grigg, Jr.; Legislative, Mrs. William B. Moncure; Membership, Mrs. Carl Meador; Program, Mrs. Richard N. Baylor; Public Relations, Mrs. Walter H. Buffey; Revisions, Mrs. George H. Snead; and Today's Health, Mrs. William M. Eagles. Special Committee Chairmen are: Civil Defense, Mrs. J. Langdon Moss; Devotional, Mrs. Hawes Campbell; Doctor's Day, Mrs. G. Douglas Hayden and Mrs. William P. Morrissette; Drug Drive, Mrs. Charles E. McKeown; Flowers, Mrs. Edmund M. LaPrade; Luncheon, Mrs. William T. Moore and Mrs. L. Benjamin Sheppard; Mental Health, Mrs. James K. Hall, Jr.; Nurse Recruitment, Mrs. Adney K. Sutphin; Personal Relations, Mrs. William L. Wingfield; Research and Romance, Mrs. Custis L. Coleman; Sheltering Arms Advisory, Mrs. Gilman R. Tyler; Telephone, Mrs. Frank Blanton; Volunteer, Mrs. Levi Hulley, Jr.; Ways and Means, Mrs. Hunter S. Jackson and Mrs. Raymond C. Hooker Jr.; and Year

Book, Mrs. I. S. Zfass. Mrs. John E. Stevens and Mrs. Jack L. Ulmer are representatives to the Richmond Council of Women's Organizations.

Hurrah for Virginia!

According to a statement by Mrs. Lee Liggan, President of the State Auxiliary, Virginia had one hundred per cent attendance of delegates at the American Medical Association Auxiliary convention held in New York City, June 3-7.

Mrs. Liggan also advises that the Auxiliary to the Danville-Pittsylvania Medical Society has a one hundred per cent membership. Each member is a contributor to the American Medical Education Foundation.

A.M.E.F.

The American Medical Education Foundation was established in 1951 by the American Medical Association, and we began our support in 1952. The purpose of this Fund is private support of medical education in this country. The Woman's Auxiliary to The Medical Society of Virginia by its support has helped to provide yearly grants to several of our 82 medical schools and especially to the Medical College of Virginia and the University of Virginia Medical School. The need for financial aid to the medical schools increases annually. Therefore, as auxiliary members, we cannot lessen our support but strive to increase our gifts whenever possible. Every dollar we contribute goes to the medical schools since the A.M.A. pays the expenses of the Foundation. This year we sent $285.00 to the national treasurer from our State; another $76.00 was forwarded but I'm afraid it was too late to be counted this year.

Several of our Auxiliaries sent $1.00 per member —many thanks for this. However, I am sorry to report six sent nothing. I hope each Auxiliary will consider sending in memorials for deceased members, also gifts of appreciation for any of our doctors who render special service.

Let's help keep the doors of our medical schools open!

Mary Ann McCoy, *Chairman*
A.M.E.F., State of Virginia

A Physician's Wife's Prayer.

Dear God, please grant me a full awareness of my responsibilities as a helpmate to my physician-husband. Help me to cultivate, practice and love the virtue of unselfishness that he may see in me the perfect wife and helpmate. Teach me to sacrifice my own plans cheerfully when they are inconsistent with his duties to the sick and afflicted, and lastly, sustain me in my effort to shoulder these responsibilities which are mine to bear, that he may be free to minister to those people entrusted in his care. Amen.

(By Frances E. Ward, past president of the Massachusetts Medical Auxiliary.)

War Against Germs

There is a constant war against germs going on in Schering Corporation's new, ultra modern Sterile Products Building at Union, N. J. This is one of the cleanest and one of the most germ free buildings in the world. The job of keeping it that way completely dwarfs the average home or industrial house cleaning job.

For example, the only air entering this $1 million structure comes through the controlled intake valves of the specially designed air conditioning system which removes all particles of dust and maintains temperature and humidity at desired levels. To make certain that no "unwanted" air enters the building, the air conditioning system is operated under positive pressure. This means that the air pressure is greater within the building than without, so that the flow of air begins in the centrally located sterile areas and circulates toward the exterior, non-sterile corridors.

All areas where production of the Schering injectible and ophthalmic pharmaceuticals are carried on, are enclosed by air tight steel and glass partitions, and bathed in germicidal ultra violet light.

No person may enter the sterile areas without first "washing up" in the sterile dressing rooms, and changing into sterile lint-free coveralls, boots, hoods, and goggles.

The last activity of each day is the sterile wash-down of the production areas. This operation prepares the area for the next days production.

Current Currents

MEMBERS ARE URGED to visit the Jamestown Festival Medical Exhibit which is located in the Headquarters of the Richmond Academy of Medicine, 1200 East Clay Street, Richmond. The Exhibit, co-sponsored by The Medical Society of Virginia, will be open to the public through October. It can be viewed from 10:00 a.m. to 2:00 p.m. on Monday through Friday and from 10:00 a.m. to 1:00 p.m. on Saturday.

Physicians will be especially interested in the exhibits on Indian Medical Practices, Sick Rooms in 17th Century, Mid-Wifery and Nursing in 17th Century, Colonial Physicians' Office, Food Habits of Early Settlers, Drugs and Medicines of the Period, Hospital Model, Population and Survival in the Virginia Colony and Colonial Sanitation Laws.

THE REVISED DOCTOR DRAFT BILL has become Public Law 85-62. This new law bears little resemblance to that which was passed during the Korean War. It provides for the selective call-up of physicians and dentists to age 35 if they were deferred from the regular draft at any time after June, 1951, in order to complete their professional training. The Defense Department estimates that the 2,200 physicians required by the services this fiscal year will come from volunteers.

OFFICERS OF STATE AND COUNTY MEDICAL SOCIETIES are urged by the AMA to read a statement in the July 13 issue of the AMA Journal reviewing the Association's reaction to the book "Prolonged Illness-Absenteeism". The book is based on a study initiated in 1952 by the Research Council for Economic Security.

The Journal article, along with an accompanying editorial in the same issue, points out just why the AMA cannot give endorsement to some of "the highly questionable conclusions of the study". The AMA believes that data taken from the study will undoubtedly pop up in state legislatures from time to time.

COMPULSORY MINIMUM SAFETY STANDARDS for automobiles have been advocated by witnesses appearing before a House Interstate Sub-Committee. Representative Bennett (D., Fla.) recommends such items as safety padding, steering control, speed capacity, visibility aids, etc. He told the Sub-Committee that it was "totally unrealistic to expect effective self-regulation in this field, despite the obvious desire of most manufacturers to make their products safe."

The Sub-Committee also heard testimony from the American Automobile Association and the National Education Association on progress of traffic safety programs in high schools. Less than 50% have such programs at the present time.

SUPPORT OF THE PRINCIPLE OF THE BRICKER AMENDMENT has been reiterated to a Senate Judiciary Sub-Committee by the American Medical Association. According to Dr. George F. Lull, Secretary and General Manager, the Association "vigorously endorses the principle of a constitutional amendment designed to restore to the states and to the Congress those legislative powers which until recent years had been thought to be secured to them by the Constitution."

Dr. Lull also stated "The American Medical Association is properly concerned over the degree to which the use of treaties has already invalidated state laws relating to the practice of medicine. We are concerned that treaties or executive agreements may, in the future, even more seriously transfer the state regulation of medical practice into the hands of those who are unaware of the requirements or desires of the people of the several states."

THE 1957 AMA PUBLIC RELATIONS INSTITUTE will be held at Chicago's Drake Hotel from August 28-29, and component medical societies should consider sending representatives to this important meeting. The Institute will grapple with such items as (1) the problem of science writers in developing stories of national significance; (2) problem of the working press in covering local medical news; (3) ethical considerations of distinguishing between advertising and legitimate medical news; (4) efficient operation of grievance committees and other mutual public relations problems.

The AMA film "Whitehall 4-1500" will be premiered during the luncheon on August 28. The slide film "Mechanical Quackery" also will be shown.

THE MAGAZINE, "CHANGING TIMES", recently published an article concerning living conditions twenty-five years from now. With reference to health, the article said "Medical bills will be paid for in advance, through insurance prepaid plans. But it doesn't look as if compulsory health insurance under government auspices is in the cards."

A NEW COLOR MOTION PICTURE, dedicated to the Radiologist, has been added to the AMA Film Library. The film, entitled "First A Physician", tells the dramatic story of what a radiologist is, what he does, and how he serves patients. Produced by E. I. du Pont de Nemours & Co., Inc., in cooperation with the American College of Radiology, the film is available to medical societies through the Library. It is said to be particularly suitable for school, club, and other public gatherings.

A NEW GUIDE ON VOLUNTARY HEALTH AGENCIES has been published by the AMA and will be available from the Council on Medical Service after August 1. Prepared by the Committee on Relationships Between Medicine and Allied Health Agencies, the booklet points up the nature of these agencies, questions that need to be answered in evaluating such agencies, the medical society's obligations to voluntary agencies, and the voluntary agency's obligations to the medical society.

Editorial....

Today's Doctor's Dilemma

A MONEY-GRABBING automaton, seeing patients along an assembly line, with no time or thought for the individual patient's personal problems and symptoms —this is the picture of today's physician in the eyes of many. "Where is the old family doctor", they ask, "the kindly philosopher and father confessor who was there when I was born, bound up my wounds, swabbed out my throat, advised me when I went away to school, when I got married, and knew me inside out and never sent a bill?"

Fifty years ago most physicians were general practitioners in small communities. Their scientific education did not touch that of the present-day physician, due to the fact that there has been so much scientific advancement during the past fifty years. These older general practitioners, however, received a better liberal arts education than the physicians of today. They were the leading citizens in the civic and social life of their towns. It was a long time between house calls, because the horse and buggy or the model-T didn't go very fast, and the family doctor had time to ruminate on his patients' problems and to take stock of the situation during the period of relative leisure. Also, in this slow-moving time, there were fewer patients for him to see, hospitals were few and small, and in general places to be avoided if possible.

During the past half century, medical science has advanced tremendously. At first, these advances were the great improvement in abdominal surgery. As an example, there was the marked decrease in the mortality rate of acute appendicitis. Then typhoid fever and malaria were conquered by finding and eliminating the cause of the disease. Rapid strides were made in the care of the newborn infant. Later, there were equally dramatic advances in the fields of thoracic and neurosurgery and a better understanding of many psychiatric diseases. More specific treatment for the mentally disturbed was obtained, and during the past twenty years, chemotherapy drugs has brought about undreamed-of help in the treatment of infectious disease of nearly all types. Lobar pneumonia, once one of the great killers, now responds dramatically to specific therapy.

Because of the rapid scientific changes which have occurred, the education of the physician has changed from one with a great emphasis on liberal arts to one stressing the sciences. Even with this intensive scientific training, the fields of medicine have become so broad that increased specialization has become necessary for any one physician to keep abreast of the advances in his own field. Because of the increased efficacy of medical care, the physician is being sought and is giving treatment to a larger number of patients and illnesses than ever before. The population also has increased at a greater rate than the number of physicians.

For these reasons, today's physician is confronted with the problem of seeing many more patients than his father. The day is only long enough to get from and give each

patient an adequate history and examination, with little extra time for general discussion by the physician and the patient on the affairs of the world.

Economically, the physician's income during this time has risen along with the rise in the cost of living. Charges for office visits, house calls and operative procedures have not risen in proportion to the rise in the cost of living. The physician, however, has been able to keep abreast by seeing more and more pateints and by adding to his own efficiency by the use of adjunctive aids, such as the laboratory, x-ray, and trained medical assistants in many fields. Here, too, the conscientious physician is in a dilemma. The voyage between this Scylla and Charybdis is perilous. When the physician cuts down on the use of ancillary facilities, important diagnoses are delayed or missed. With indiscriminate use of laboratory tests and x-rays, medical costs to the patient soar.

The medical costs that the layman must bear have risen tremendously. This is due to the great increase in the use of hospitals and cost of hospitalization. This cost is largely a reflection of the increased cost to the hospital for food and labor.

Plato said "No physician, insofar as he is a physician, considers his own good in what he prescribes, but the good of his patient; for the true physician is also a ruler having the human body as a subject, and is not a mere money-maker." This is certainly as true today as it was 2500 years ago or fifty years ago.

What is the solution to this dilemma? There is certainly no easy one. It is hard to see how the number of patients seen can be cut down. To increase greatly the number of physicians would be an almost insupportable financial burden to the American public and at the same time largely impractical. It takes time to produce good teachers and to build and equip medical schools efficiently so that the number of physicians would be increased.

In the meantime, today's physician has little time for his civic responsibilities. What little time the physician does have free from his patients is largely devoted to staff meetings at various hospitals, local, state, sectional and national medical meetings, both of the general type and meetings in his own specialty, and social gatherings consisting largely of physicians and their wives. In order for the physician to keep abreast of the scientific advancement, it is important for him to attend a number of meetings. However, a considerable part of this time in medical meetings is spent in unnecessary committee work, formation of unnecessary women's auxiliaries and other activities which make the physician more, rather than less, isolated.

In order for today's physician to improve his civic and social standing in the community and the public relations of the medical profession generally, he must make an extra effort to use his spare time for the community. Individually, we should offer and give our services as counselors to those distressed in mind or spirit, put more emphasis on social contact with laymen of the community and less with fellow physicians and try, where possible, to do our share by giving both our time and money to community projects.

Hugh H. Trout, Jr.

The Two Year Nursing Course

IN THE JULY, 1946, issue of the Virginia Medical Monthly, a Guest Editorial by Drs. Carrington Williams and Harry J. Warthen entitled "The Training of the Graduate Nurse" contained the following conclusion—

"The solution, we think, is not too difficult if the authorities in this State will seek a solution for Virginia without influence and pressure from other sources. We propose that the Virginia schools immediately convert to a two year course with substantial reduction of the didactic work. At the same time in the larger schools postgraduate courses should be offered for training in special lines. It would seem evident that a nurse graduating in two years is adequately trained for bedside nursing and would be superior to the one year graduate. For those with superior preliminary training, or desire and ability to specialize, the postgraduate year or years would offer unlimited possibilities.

"The advantages of this proposal are:

(1) the shorter period of training and reduction of expense to the pupil would attract large numbers;

(2) one class of nurse of high quality would be continued;

(3) better specialists would result from the planned postgraduate courses;

(4) the care of the sick would be restored as the primary objective of graduate nurse training.

"One of the major objections to be made by the nursing educators is that such a two year graduate would not be recognized by the boards in the majority of other states. The answer to this is simple; if she so desires the nurse can continue her education for another year and thereby become eligible to register in the 38 states which now require three years of training but it is our belief that many other states would quickly fall in line if Virginia would be the pioneer.

"The basic law of Virginia and nine other states require only two years for training a graduate nurse and leaves the details of the curriculum to the Board of Nurse Examiners. It is therefore in the power of our Virginia Board of Nurse Examiners to make the change immediately. We request them to seriously consider making this change. It is an opportunity for Virginia to lead the nation out of a critical situation."

Since this was written eleven years ago the majority of states have changed their requirements to sanction only two years of training to permit qualification as a registered nurse. Two college affiliated nursing schools in Norfolk and Bristol have just completed a satisfactory trial run of the shortened and condensed type of training.

It has been announced recently that the Medical College of Virginia will start a two year nursing course in September 1958. The Richmond Memorial Hospital which was opened on January 19, 1957, will not be permitted to have a Nurses Training School until it had been in operation one year but it is the intention of the Board of Trustees of this hospital to institute a two year nursing course next year.

It is unfortunate that so many years have been permitted to elapse since this solution to a critical shortage was first advocated but it is better to do it late than not at all.

H.J.W.



HEADQUARTERS BUILDING

MEDICAL SOCIETY OF VIRGINIA

WINDSOR FARMS RICHMOND, VIRGINIA

MARCELLUS WRIGHT & SON
ARCHITECTS
RICHMOND VIRGINIA

Society Proceedings . . . .

Roanoke Academy of Medicine.

At the meeting of the Academy on June 3rd, Dr. Alexander McCausland was named president-elect. He will succeed Dr. David S. Garner who will be installed as president in September. Dr. Harry B. Stone, Jr., is current president. Other officers are: vice-presidents, Dr. Hugh H. Trout, Jr., and Dr. W. H. Saunders; and secretary, Dr. Peter Wallenborn. Dr. William H. Kaufman, Dr. Robert Hutcheson, and Dr. John Gardner were appointed to the executive committee. Dr. Alfred P. Jones and Dr. Reverdy Jones were appointed to the judicial and ethics committee.

Portsmouth Academy of Medicine.

Dr. Russell M. Cox has been elected president of the newly organized Academy which held its first meeting on June 28th. Other officers are: vice-president, Dr. Paul Robinette; secretary, Dr. M. C. Glynn; and treasurer, Dr. A. A. Kirk.

The Portsmouth Academy of Medicine includes the geographical and municipal area of Portsmouth city and adjacent Norfolk County on the west side of the Elizabeth River and will represent an independent society of 65 to 70 doctors One scientific meeting will be held each month and business meetings will be called when necessary. A charter was granted to the Academy by The Medical Society of Virginia at its recent Council meeting.

News Notes . . . .

The New Headquarters Building.

The Medical Society of Virginia will soon have a new home, and members need but look at the artist's drawing on the opposite page to realize that here is a structure of which everyone can be proud.

The new headquarters will be located on the corner of Dover and Hathaway Roads in one of the prettiest sections of Richmond's west end—an area in which property values can be expected to maintain their present level for many years.

Designed for service, the building will contain those features so necessary for dependable, efficient operation. Here will be the center of Society activities—a workshop not only for committees and specialty groups, but for individual members as well.

The ground level will contain offices, work and storage rooms, a vault for old and priceless records, visitors' waiting room, and a conference room which will seat 55 comfortably.

Immediately over the conference room will be the offices of the Virginia Academy of General Practice and other allied groups. Thus, the new headquarters will, in fact, become the center of much of the medical organizational work in Virginia.

Spacious parking facilities will be available in a special off street parking area in front of the building—a feature sorely needed in these days of "modern living".

Construction is expected to begin within the next six to eight weeks and your Editors will keep you informed of its progress. However, it is hoped that you will visit the location at your earliest opportunity and observe firsthand the beauty of the natural setting.

New Members.

Since the list published in the July issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

John Fauntleroy Butterworth, III, M.D., Richmond
Alfred Frederick DeMilia, M.D., Free Union
Oswald Warrington Hoffler, M.D., Norfolk
Edward Claiborne Irby, M.D., Richmond
Leon Williams Powell, M.D., Danville
James Charles Wickstrom, M.D., Virginia Beach

Revision of Fee Schedule.

The Blue Shield Plan that has its headquarters in Richmond is considering a revision of the Fee Schedule pertinent to its Standard Contract. Each specialty society in the State has been asked by the Plan's Board of Directors to appoint a committee from its membership to meet with a committee of Plan Directors and to give such advice about Blue Shield fees and arrangements as is requested. These specialty society committees will welcome suggestions from all physicians who practice in the Richmond Plan area, whether they be specialty society members or not. The chairmen of the committees are:

Anesthesiology:
William B. Moncure, M.D.
413 Stuart Circle
Richmond

Internal Medicine:
T. Dewey Davis, M.D.
501 East Franklin Street
Richmond

General Practice:
R. G. McAllister, M.D.
1016 West Franklin Street
Richmond

Neuropsychiatry:
George S. Fultz, Jr., M.D.
212 West Franklin Street
Richmond

Obstetrics and Gynecology:
Millard B. Savage, M.D.
1205 Colonial Avenue
Norfolk

Ophthalmology and Otolaryngology:
Edwin D. Vaughan, M.D.
Professional Building
Richmond

Orthopedic Surgery:
Beverley B. Clary, M.D.
Medical Arts Building
Richmond

Pathology:
Karl F. Menk, M.D.
King's Daughters' Hospital
Staunton

Pediatrics:
Thomas S. Chalkley, M.D.
3011 Monument Avenue
Richmond

Radiology:
Carney C. Pearce, M.D.
Medical Arts Building
Petersburg

Surgery:
John M. Emmett, M.D.
C. & O. Hospital
Clifton Forge

Urology:
William R. Jones, M.D.
923 West Franklin Street
Richmond

Dr. Cary Suter,

University of Virginia, has been awarded a special clinical traineeship by the National Institute of Neurological Diseases and Blindness for special training in neurology. He has been granted a leave of absence as assistant professor of neurology and psychiatry and will spend a year in advance training in neurology and electroencephalology at the Mayo Clinic in Rochester.

4-H Club Health Winners.



Dr. A. L. Van Name, Jr., Chairman of the Committee on Rural Health, recently presented 4-H Club Health winners their awards on behalf of the Society. This marks the first year that The Medical Society of Virginia has sponsored the Health Awards and taken an active part in recognizing the important health projects carried on by the youth of Virginia. Receiving $50.00 savings bonds were, from left to right: Susan Wood, Carolyn Morrison, and Betty Blanton. Similar awards were made to Linda Wilson, Juanita Grandstaff, and Peggy Berger.

Dr. Walter O. Klingman

Has resigned as professor of neurology and psychiatry and head of the neurology division of the department of neurology and psychiatry at the University of Virginia Medical Center, to accept a position at the University of Texas Medical Branch at Galveston, Texas. He will be professor of neurology and psychiatry and head of the neurology division. Dr. T. R. Johns has been appointed acting head of the neurology service at the University.

109 Years of Practice.

The Doctors Booker have added another chapter to their family's 109 year medical history in the Northern Neck. The latest milestone is an ultra-

modern maternity hospital opened by Dr. C. Leonard Booker who practices at Lottsburg with his father, Dr. Robert E. Booker and his brother, Dr. J. Motley Booker.

The first Booker to practice in the Northern Neck was Dr. Erasmus Derwin Booker who came to Richmond County in 1848. His saddlebags occupy a place of honor in the Booker homeplace near the Booker Clinic. He was followed by his son, Dr. Judson H. Booker, who practiced in Lottsburg. He died in 1902 and his practice was assumed by Dr. Robert Booker, who is the founder of the Booker Clinic.

Dr. John W. Hooker,

Danville, has been named "Father of the Year" in the annual event sponsored by the Retail Merchants Association. He was nominated by the Rotary Club and topped seven other entries.

Dr. Foy Vann,

Norfolk, has been presented with a plaque for his outstanding work with the Kiwanis Clinic for Crippled Children. He was surgeon-in-charge of the clinic from 1948, when it was founded, to 1956.

American College of Chest Physicians.

At the annual meeting of the College held in New York City in June, the following received Certificates of Fellowship: Dr. Thomas N. P. Johns, Richmond; Dr. Charles G. Pearson, Charlottesville; and Dr. Marcellus A. Johnson, III, Roanoke.

Dr. Weir Tucker,

Richmond, was guest speaker at the July meeting of the Hopewell Business and Professional Women's Club.

Dr. E. W. Bosworth,

Lexington, has been appointed post surgeon for Virginia Military Institute, effective September 1st. He succeeds Dr. Brooke B. Mallory, who resigned after having been post surgeon for the past twenty years.

Dr. Norman Francis Wyatt

Opened his office in Hopewell on June 3rd. He has recently been practicing in Marion.

Radford Community Hospital.

The Thirteenth Annual Banquet and Scientific Program of this Hospital was held on July 25th. Guest speaker was Dr. Harry A. Oberhelman, professor and chairman of the Department of Surgery, Stritch School of Medicine of Loyola University and Mercy Hospital, and attending surgeon of Cook County Hospital, Chicago. His subject was "The Acute Abdomen".

Dr. Harry H. Pendleton

Is now associated with the Giesen-Hartwell Clinic, Radford, in the practice of general surgery. He is a graduate of the Hahnemann Medical School and served his surgical residencies at the University of Pennsylvania and the Delaware General Hospital.

American Board of Obstetrics and Gynecology.

Applications for certification, new and reopened, Part I, and requests for re-examination Part II are now being accepted. All candidates are urged to make such application at the earliest possible date. Deadline for receipt of applications is September 1st.

Candidates for admission to the Examinations are required to submit with their application an unbound 8½ x 11" typewritten list of all patients admitted to the hospitals where they practice, for the year preceding their application, or the year prior to their request for reopening of their application.

Current Bulletins outlining present requirements may be obtained by writing the Secretary, Dr. Robert L. Faulkner, 2105 Adelbert Road, Cleveland 6, Ohio.

Dr. E. Claiborne Irby,

Richmond, has been appointed as city jail physician, succeeding Dr. W. C. Gill, Jr., who resigned.

Dr. Herman W. Farber

Is the new president of the Petersburg Lion's Club. Dr. Nelson M. Smith is second vice-president.

Dr. Matthew T. Morehead

Has returned to Norton as medical director and pathologist at the Norton Community Laboratory. For the past year he has been on the staff of Presbyterian Hospital in Hollywood, California.

Dr. Margaret Glendy,

Roanoke, has been appointed acting city health commissioner. She will fill the vacancy caused by the retirement of Dr. Charles M. Irvin until a permanent replacement can be found.

Dr. D. E. Watkins,

Waynesboro, has been appointed by Governor Stanley for a five year term on the State Board of Medical Examiners.

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For further details, contact Dr. R. S. LeGarde, Director, Orange County Health Department, Orange, Va. (*Adv.*)

Obituaries . . . .

Dr. Thomas Griffin Hardy,

Prominent physician of Farmville, died June 24th, having been in ill health for some time. He was sixty-seven years of age and a graduate of the Medical College of Virginia in 1914. Dr. Hardy started his practice in Farmville in 1916 and established a private hospital there in 1920. He operated this hospital until the Southside Community Hospital was opened in 1927. Dr. Hardy was a principal participant in the organization of this hospital, working with the Commonwealth Fund of New York, which chose the Southside Community Hospital as the first unit to be established under its sponsorship in the United States. He was a member of the hospital's surgical staff. Dr. Hardy was active in civic affairs and was a charter member of the Lions Club. He was a past president of the Fourth District Medical Society and a past member of the State Board of Medical Examiners. He had been an active member of The Medical Society of Virginia since 1916.

His wife and four children survive him. His son is Dr. Thomas G. Hardy, Jr., of Richmond.

Dr. George Garland Rhudy,

Roanoke, died June 20th. He apparently suffered a heart attack and was found dead in his car near Strasburg, Colorado, where he was on a vacation trip. Dr. Rhudy was sixty-nine years of age and a graduate of the Medical College of Virginia in 1915. He was a specialist in Eye, Ear, Nose and Throat, and had practiced in Roanoke for thirty years. Dr. Rhudy had been a member of The Medical Society of Virginia since 1928.

Two daughters, a stepson and a stepdaughter survive him.

Dr. Herbert Old,

Philadelphia, died May 24th, at the age of eighty-seven. He was a graduate of the Department of Medicine of the University of Virginia in 1895. Dr. Old was a native of Norfolk and practiced there for some years before going to Philadelphia where he was with the Provident Mutual Life Insurance Company. Dr. Old had been a member of The Medical Society of Virginia since 1898 and was made a Life Member in 1948.

Dr. Ellison.

On April 6, 1957, a tragic accident removed from our midst our friend and colleague Dr. J. Roland Ellison, Jr., of Suffolk, Virginia.

We, the members of this Society along with the many other friends, patients and co-workers hereby attempt to record our feelings at his untimely passing.

THEREFORE BE IT RESOLVED that this Society go on record as expressing our deepest sorrow and regret and keen sense of loss in the death of a true friend, skillful physician and public-spirited citizen.

BE IT FURTHER RESOLVED that copies of this resolution be forwarded to his bereaved wife, children and mother, be published in the Virginia Medical Monthly and be spread upon the minutes of this Society as a permanent record of our grief.

F. I. STEELE, M.D.
W. N. EDDY, M.D.
W. HOLMES CHAPMAN, JR., M.D.
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1. Pitt, M. B.: Leukorrhea. Causes and Management, J. M. A. Alabama *25*:182 (Feb.) 1956.
2. Parker, R. T.; Jones, C. P., and Thomas, W. L.: Pruritus Vulvae, North Carolina M. J. *16*:570 (Dec.) 1955.

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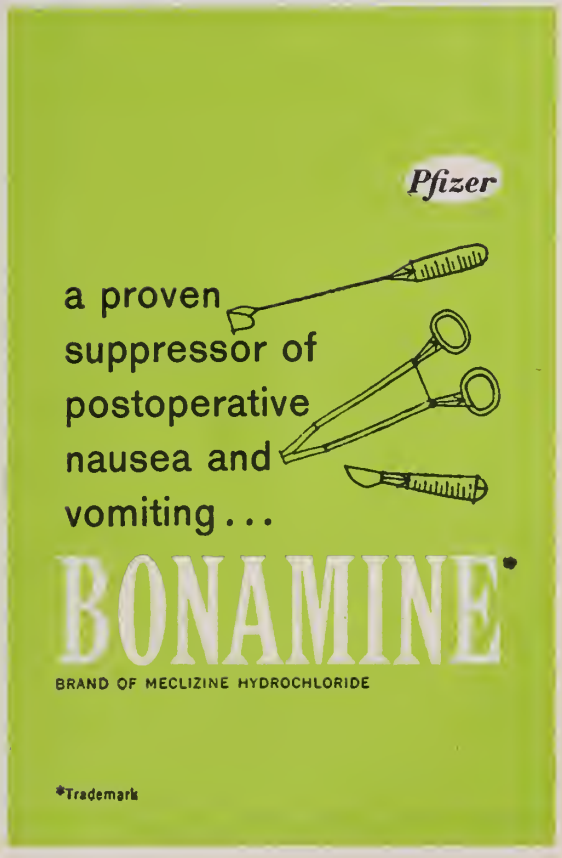
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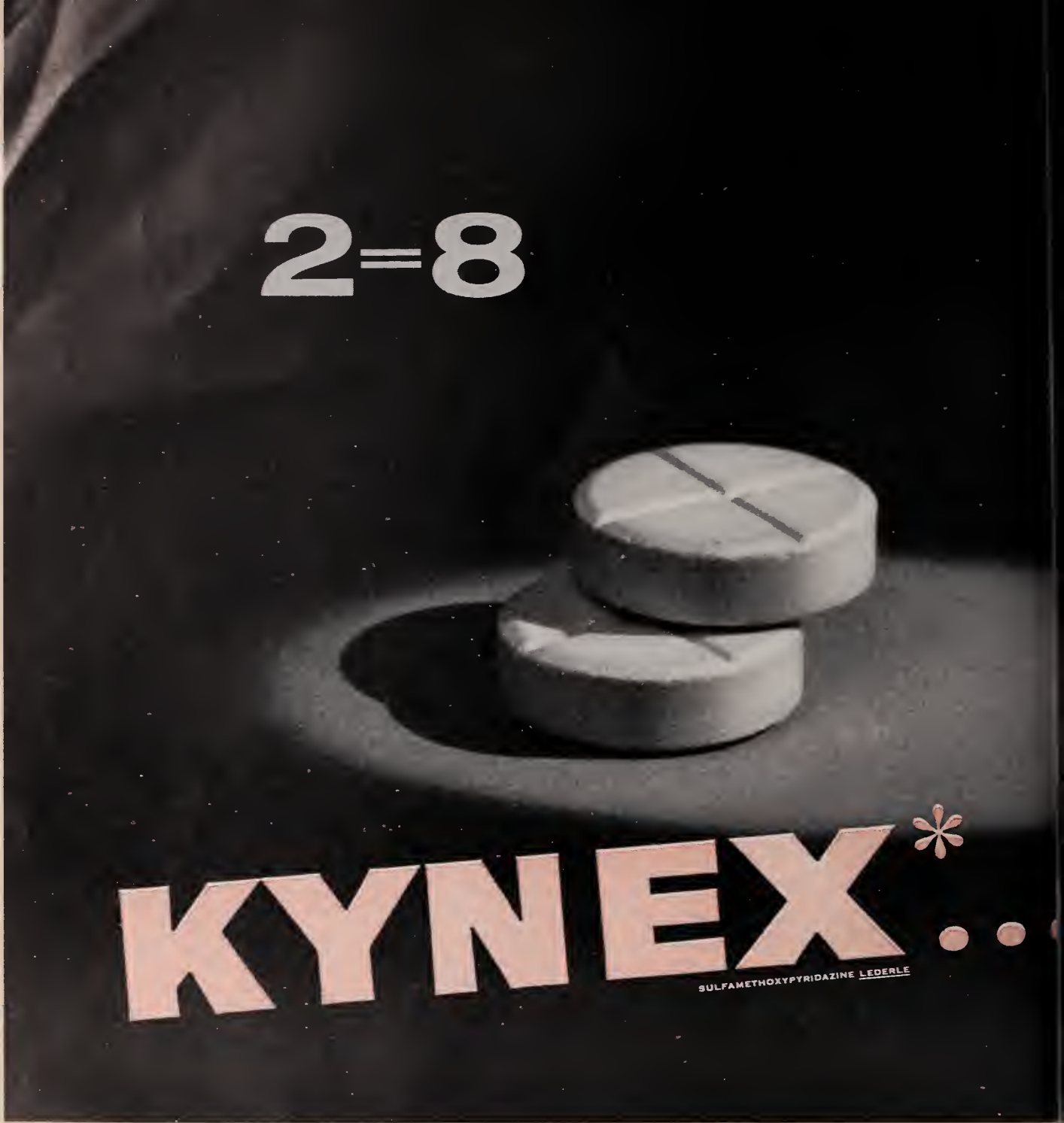
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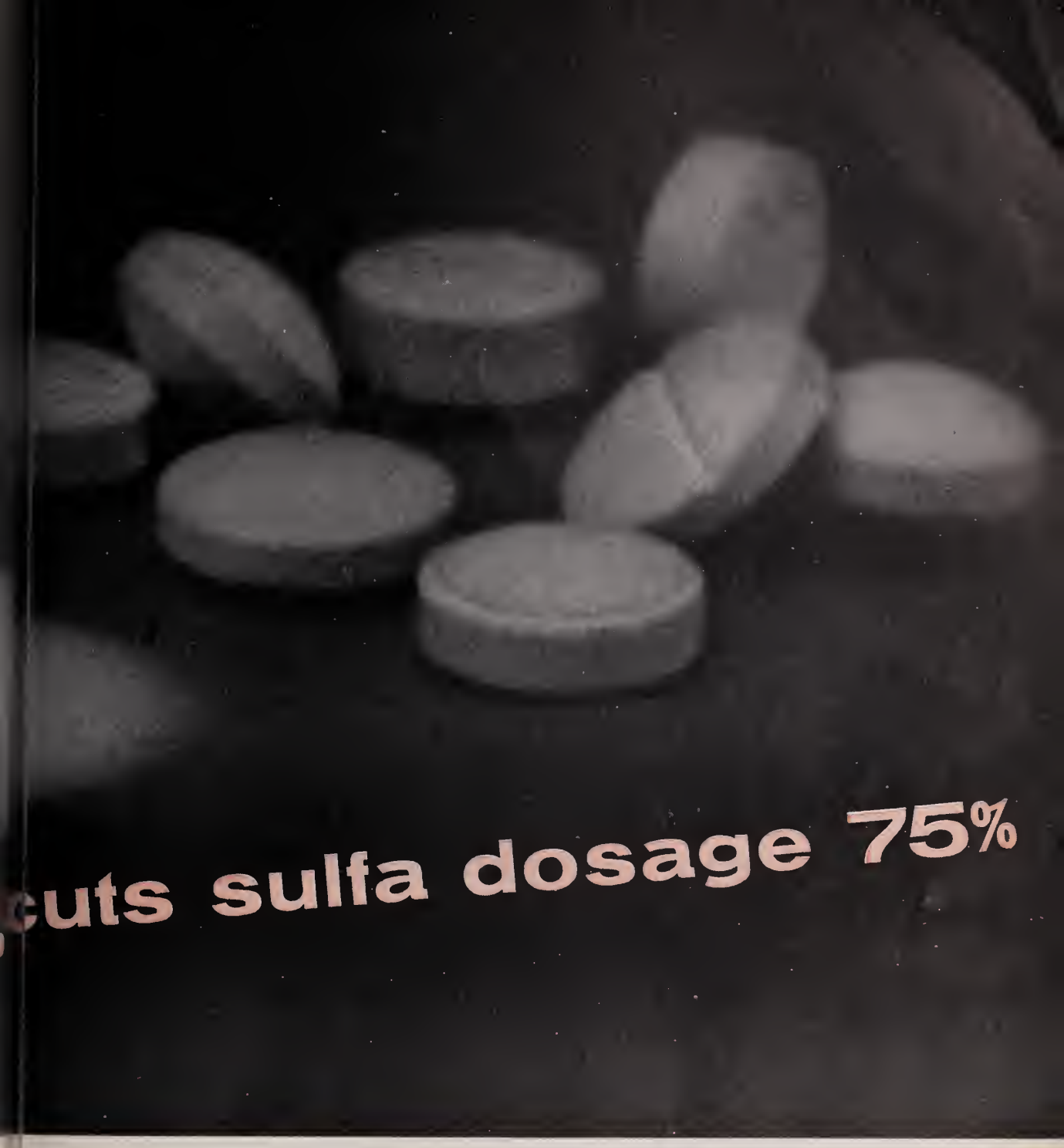
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(1) Boger, W. P.; Strickland, C. S. and Gylfe, J. M.: Antibiot. Med. & Clin. Ther. 3:378 (Nov.) 1956.

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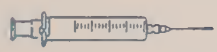
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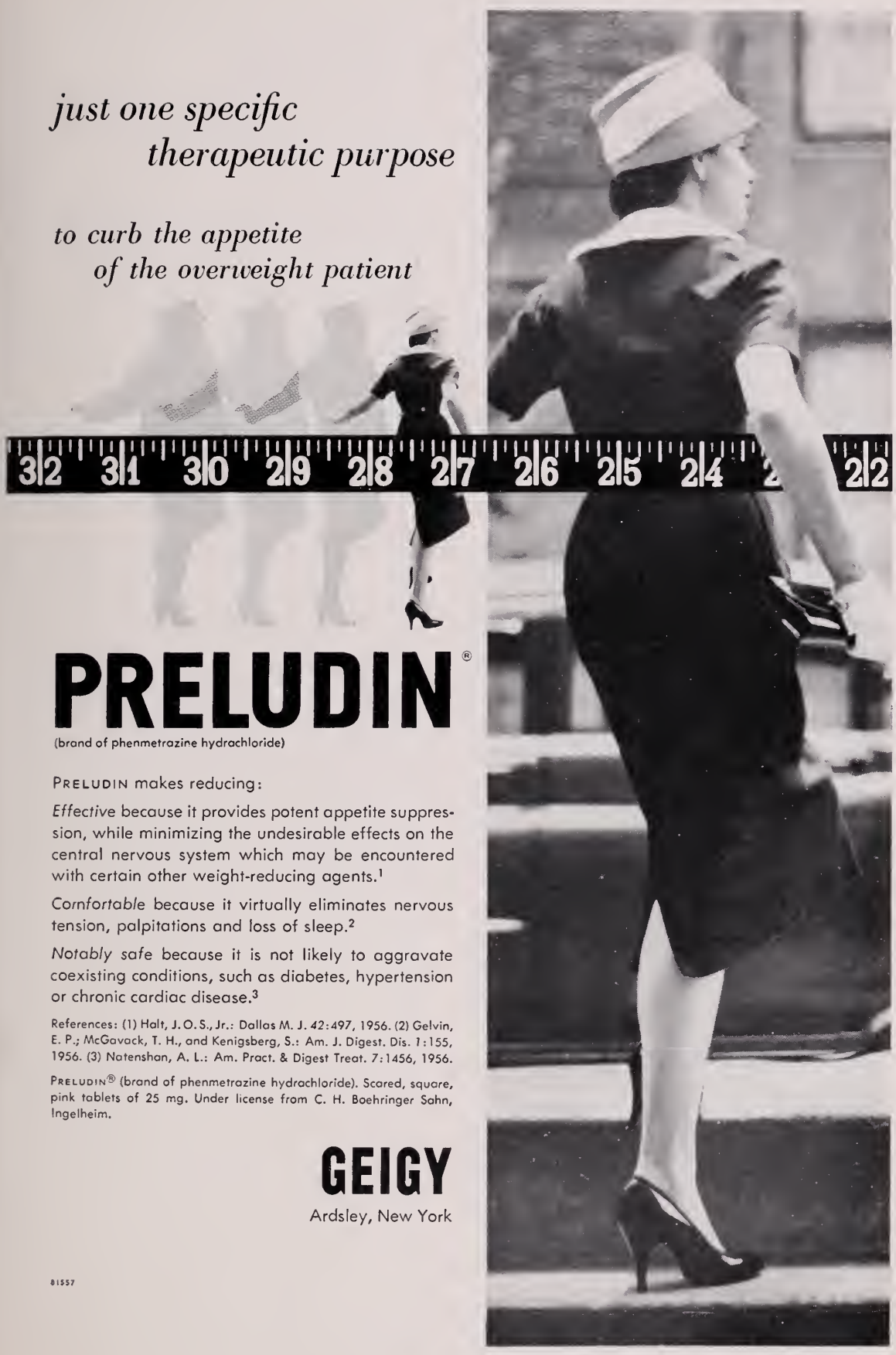
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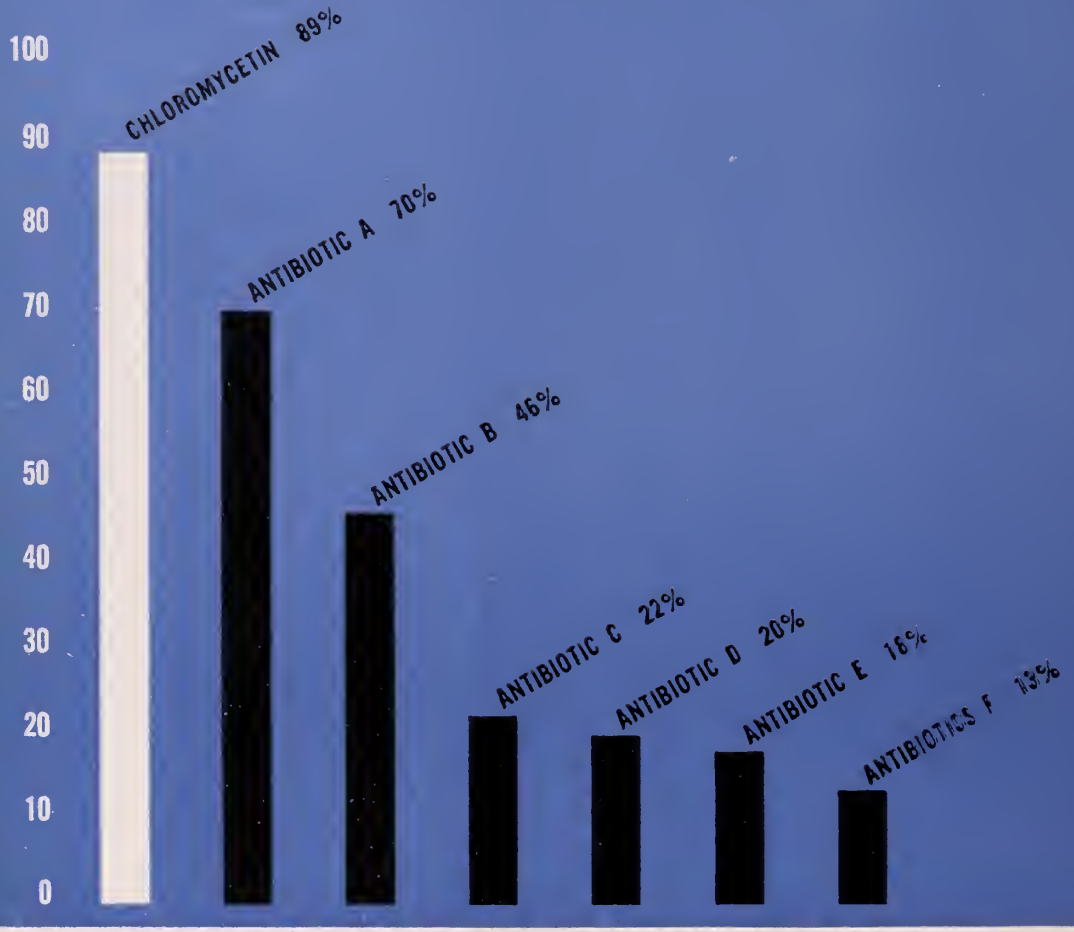
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*This graph is adapted from Kempe, C. H.: *California Med.* 84:242, 1956. The single bar designated as "Antibiotics F" represents three widely used, chemically related agents grouped together by the investigator. Strains isolated January-June, 1954.

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A REPORT ON A PROMISING CONCEPT IN ANTIMICROBIAL THERAPY:
CONCURRENT ADMINISTRATION OF CHLOROMYCETIN AND GAMMA GLOBULIN

In treatment for infection, the physician is confronted with complex interactions between pathogen, antimicrobial agent and host. The pathogen represents the unselected factor, the therapeutic agent the component over which the physician exercises maximum control. But even with optimal antibiotic therapy, the eventual elimination of the infective agent and the resolution of pathologic changes depend upon efficient host response.[1,2]

Passive transfer of antibodies through gamma globulin provides a broad antibacterial spectrum because of origin in adults exposed to a variety of microorganisms. Employed as a protective element against some of the more common contagious diseases, gamma globulin permits more competent participation by the host in the fight against established infection.

Rationale for immuno-antibiotic therapy lies in simultaneous direct attack on the pathogen and re-enforced host resistance, which implies usefulness in treatment for acute fulminating, highly refractory, or prolonged infections.

EXPERIMENTAL STUDIES ENCOURAGING

In carefully controlled studies in mice, Fisher and his colleagues in Parke-Davis Research Laboratories, using pooled human gamma globulin and Chloromycetin (chloramphenicol, Parke-Davis) concurrently, demonstrated a high degree of therapeutic effectiveness in infected animals.[3] Five types of infection induced with species of Staphylococcus aureus, Streptococcus pyogenes, Proteus vulgaris and Pseudomonas aeruginosa responded to joint therapy with gamma globulin and Chloromycetin, each agent having shown at deliberately low doses in previous work little or no activity in these mouse infections when used separately. Fisher's experiences with hemolytic streptococci have been confirmed.[4]

Tests now in progress with pneumococci, salmonellae and additional strains of pseudomonas and proteus indicate that marked increases in survival rates may be anticipated in any infection where chloramphenicol has previously demonstrated therapeutic activity.[3] These observations suggest that immuno-antibiotic therapy can effect cures in a variety of refractory microbial diseases.

PROMISING IN EARLY CLINICAL TRIAL

Observations analogous to those of Fisher have been reported from the clinic.[5-7] More recently, the clinical use of gamma globulin in conjunction with antibiotics was undertaken by Waisbren[8] on the basis of Fisher's experimental work. His series of 46 patients with systemic and localized infections due to various strains of staphylococcus, pseudomonas, salmonella, proteus and to the pneumococcus had failed to respond to maximum effort with conventional therapeutic measures. Marked clinical improvement in six of these acutely ill patients shows clearly "...that in certain instances the addition of gamma globulin to antibiotic therapy may give a clinical result that could not have been obtained with the antibiotics used alone. In each of these cases, a long and extensive control period in which antibiotics were being vigorously administered had failed to produce a response but when gamma globulin was given with approximately the same dosages of antibiotic, rather marked improvements occurred."[8]

While the precise mechanism underlying the salutary effect of gamma globulin remains to be clarified, the existence of quantitative hypogammaglobulinemia was ruled out in patients in this series.[8]

A RATIONALE FOR IMMUNO-ANTIBIOTIC THERAPY

Although the relationship of susceptibility to infection and status of the host is well recognized, host resistance is an aspect of infectious disease still not understood in an era of extensive and of massive antibiotic therapy. Most antibiotics, in concentrations tolerated by living tissues, have bacteriostatic rather than bactericidal effect. In the clinic, bacteriostatic doses are most frequently given and host defense mechanisms are responsible for the eventually satisfactory clinical result.[4]

The problem of therapeutic failures despite vigorous courses of antibiotic therapy may be due to some disturbance in the immune process.[9] In addition, disproportionately high mortality rates in the extremes of life lend support to the impression of inadequate defense mechanisms, since these are underdeveloped and immature in the very young and may be impaired or depressed in the aged.[4]

Any discussion of immuno-antibiotic treatment must at present remain largely conjectural. From preliminary evidence, however, this approach to therapy appears worthy of consideration, especially in patients in whom adequate antibiotic therapy for active infectious processes has been disappointing. While the concept of enlisting the aid of the host in combating pathogenic microbes, thereby affording the physician control of two of the three principal interacting factors, is not new, enhancement of host resistance through use of gamma globulin in treatment for microbial disease is indeed a promising one.

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when anxiety and tension "erupts" in the G. I. tract...

IN GASTRIC ULCER



PATHIBAMATE*

Meprobamate with PATHILON® Lederle

Combines Meprobamate (*400 mg.*) the most widely prescribed tranquilizer . . . helps control the "emotional overlay" of gastric ulcer — without fear of barbiturate loginess, hangover or habituation . . . *with* PATHILON (*25 mg.*) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

Dosage: 1 tablet t.i.d. at mealtime. 2 tablets at bedtime. *Supplied:* Bottles of 100, 1,000.

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FOR THE ENTIRE RANGE OF RHEUMATIC-ARTHRITIC DISORDERS—from the mildest to the most severe

many patients with **MILD** involvement can be effectively controlled with

'MEPROLONE'

many patients with **MODERATELY SEVERE** involvement can be effectively controlled with

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NEW

and **NOW** for patients with **SEVERE** involvement

MULTIPLE COMPRESSED TABLETS

'MEPROLONE'

The only meprobamate-prednisolone therapy



the one antirheumatic, antiarthritic that simultaneously relieves: (1) muscle spasm (2) joint inflammation (3) anxiety and tension (4) discomfort and disability.

SUPPLIED: Multiple Compressed Tablets in three formulas: 'MEPROLONE'-5—5.0 mg. prednisolone, 400 mg. meprobamate and 200 mg. dried aluminum hydroxide gel. 'MEPROLONE'-2—2.0 mg. prednisolone, 200 mg. meprobamate and 200 mg. dried aluminum hydroxide gel. 'MEPROLONE'-1 supplies 1.0 mg. prednisolone in the same formula as 'MEPROLONE'-2.

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optimal dosages for ATARAX,
based on thousands of case histories:

25 *mg. (t.i.d.)*

for these **25** *adult indications:*

TENSION · SENILE ANXIETY · MENOPAUSAL SYNDROME · ANXIETY · PREMENSTRUAL TENSION
PHOBIA · HYPOCHONDRIASIS · TICS · FUNCTIONAL G. I. DISORDERS · PRE-OPERATIVE ANXIETY
HYSTERIA · PRENATAL ANXIETY · AND ADJUNCTIVELY IN CEREBRAL ARTERIOSCLEROSIS
PEPTIC ULCER · HYPERTENSION · COLITIS · NEUROSES · DYSPNEA · INSOMNIA
PRURITIS · ASTHMA · ALCOHOLISM · DERMATITIS · PARKINSONISM · PSORIASIS

perhaps the safest ataraxic known

PEACE OF MIND ATARAX®
(BRAND OF HYDROXYZINE)
Tablets-Syrup

10 *mg. (t.i.d.)*

for these **10** *pediatric indications*

ANXIETY · TICS · HOSTILITY · NIGHTMARES · HYPEREMOTIVITY · RESTLESSNESS
TEMPER TANTRUMS · HOSPITAL FEAR · AND ADJUNCTIVELY IN ASTHMA · ENURESIS

Consider these 3 ATARAX *advantages:*

- 9 of every 10 patients get release from tension, without mental fogging
- extremely safe—no major toxicity is reported
- flexible medication, with tablet and syrup form

Supplied:

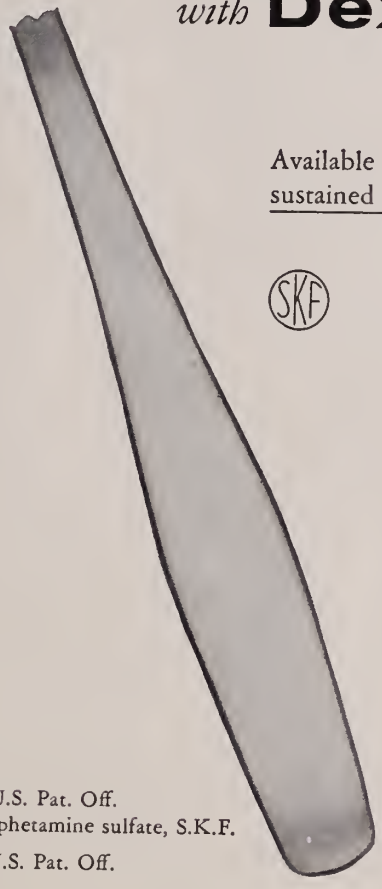
In tiny 10 mg. (orange) and 25 mg. (green) tablets, bottles of 100.

ATARAX Syrup, 10 mg. per tsp., in pint bottles. Prescription only.

Rx PFIZER
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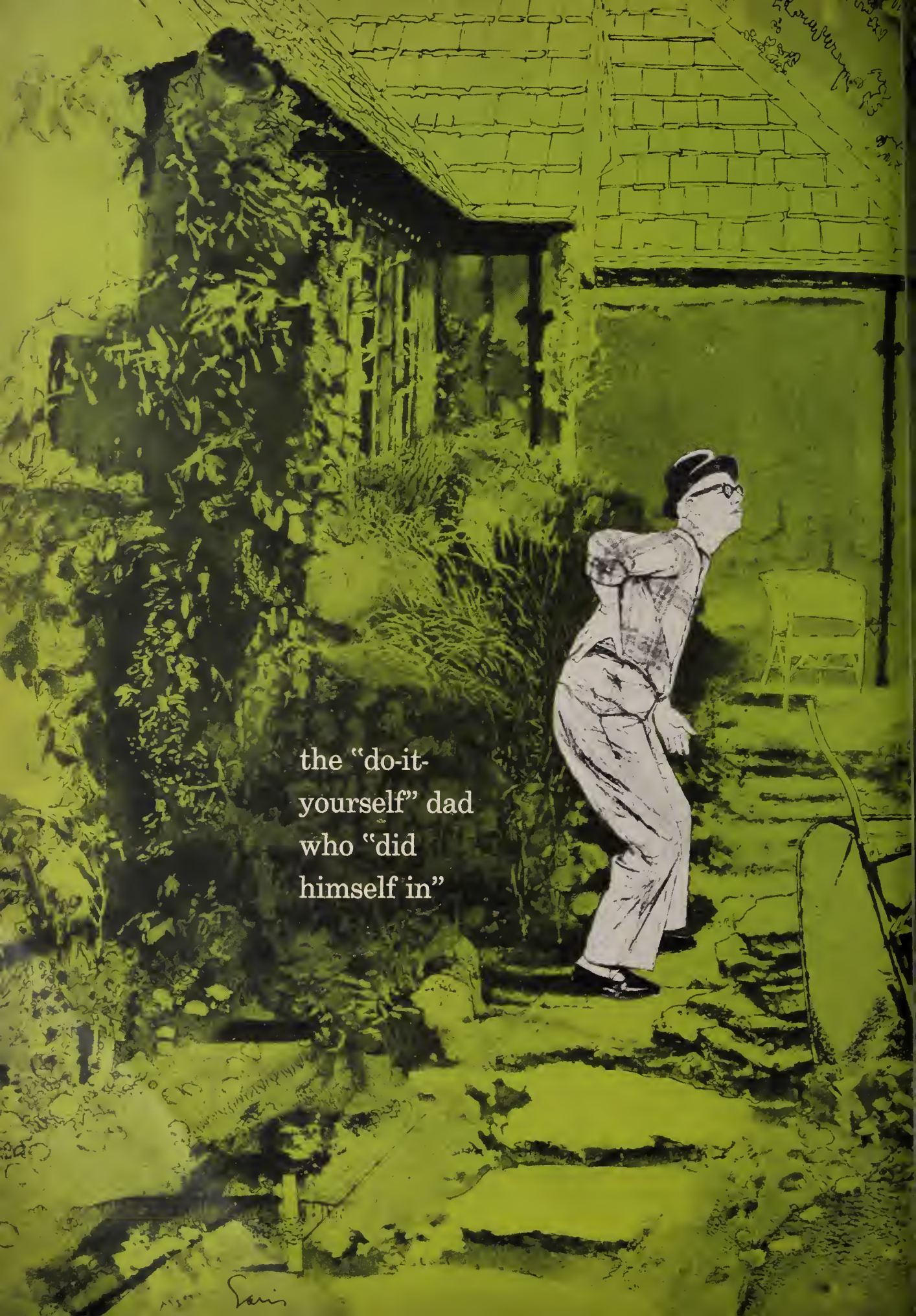
Overeating is a bad habit—
you can help your patients
to break it
with **Dexedrine***



Available as tablets, elixir, and Spansule† sustained release capsules.

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for dextro-amphetamine sulfate, S.K.F.
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the "do-it-
yourself" dad
who "did
himself in"

lumbago

For persons who overestimate their physical capacity —as with this do-it-yourself dad—chronic fibrositis may be a postscript to a weekend of accomplishment.

SIGMAGEN therapy is encouraged in the treatment of chronic fibrositis to alleviate pain and prevent progression of the disorder to fibrosis and calcification.

SIGMAGEN provides doubly protective corticoid-salicylate therapy. METICORTEN® (prednisone) and acetylsalicylic acid are combined to provide additive antirheumatic benefits and rapid analgesic effect. These dual clinical values are enhanced by aluminum hydroxide to counteract excess gastric acidity and by ascorbic acid to help meet the increased need for this vitamin during stress situations.

Therapy should be individualized. *Acute conditions:* 2 or 3 tablets 4 times daily. Following desired response, gradually reduce daily dosage and discontinue. *Subacute or chronic conditions:* Initially as above. After satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

Precautions: Because SIGMAGEN contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of SIGMAGEN.

for patients who go beyond their physical capacity

protective corticoid-salicylate therapy

SIGMAGEN®

corticoid-analgesic compound Tablets

Prednisone	0.75 mg.	Aluminum hydroxide	75 mg.
Acetylsalicylic acid	325 mg.	Ascorbic acid	20 mg.

SG-J-987

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in topical and ophthalmic infections

USE 'POLYSPORIN'®

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POLYMYXIN B—BACITRACIN OINTMENT

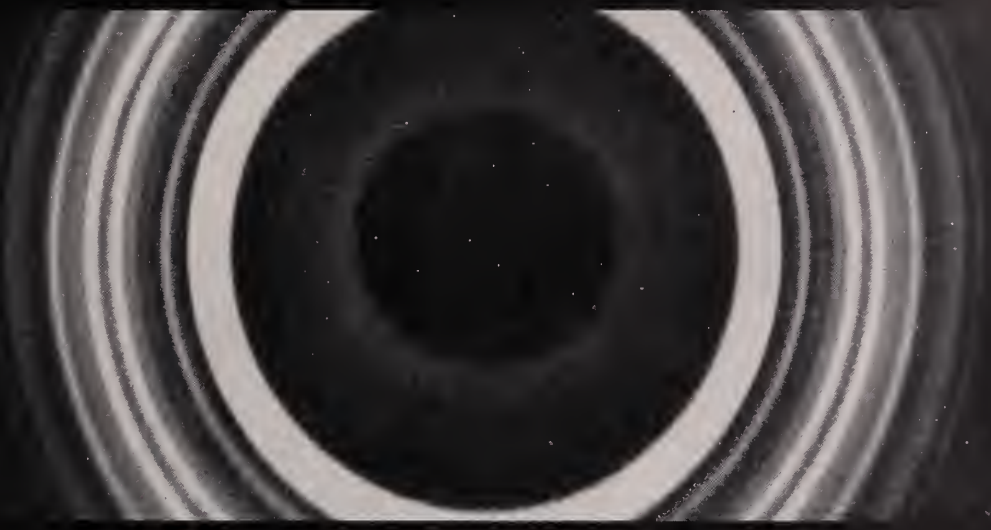
to insure broad-spectrum therapy with minimum allergenicity

For topical use: in ½ oz. and 1 oz. tubes.
For ophthalmic use: in ⅛ oz. tubes.



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PARKE-DAVIS ANNOUNCES A MAJOR ADVANCE IN FEMALE HORMONE THERAPY



▲ The x-ray diffraction pattern of NORLUTIN distinguishes its crystal structure from that of other progestogens.

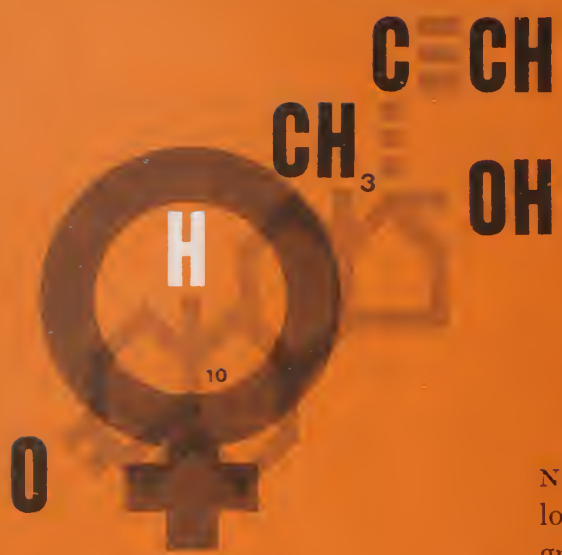
NORLUTIN™

(norethindrone, Parke-Davis)

oral progestational agent with unequalled potency and unsurpassed efficacy

UNEQUALLED POTENCY

for oral progestational therapy



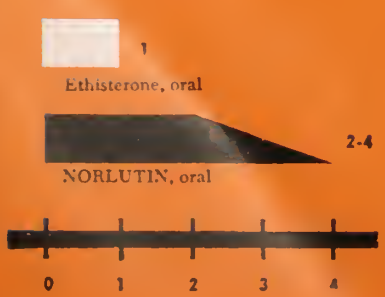
NORLUTIN
(17-alpha-ethinyl-19-
nortestosterone)

NORLUTIN is an example of "...increased biological activity of a steroid when the methyl group at carbon 10 is replaced with hydrogen."[1]

NORLUTIN

INDICATIONS FOR NORLUTIN: amenorrhea, menstrual irregularity, functional uterine bleeding, infertility, habitual abortion, threatened abortion, premenstrual tension, dysmenorrhea.

RELATIVE POTENCIES OF ETHISTERONE AND NORLUTIN IN HUMANS[2,3]



REFERENCES: (1) Hertz, R.; Tullner, W., & Raffelt, E.: *Endocrinology* 54:228, 1954. (2) Greenblatt, R. B.: *J. Clin. Endocrinol.* 16:869, 1956. (3) Hertz, R.; Waite, J. H., & Thomas, L. B.: *Proc. Soc. Exper. Biol. & Med.* 91:418, 1956. (4) Tyler, E. T.: *J. Clin. Endocrinol.* 15:881, 1955. (5) Greenblatt, R. B., & Clark, S. L.: M. Clin. North America, Philadelphia, W. B. Saunders Co. (Mar.) 1957, p. 587.

PACKAGING: 5 mg. scored tablets (C. T. No. 882), bottles of 30.

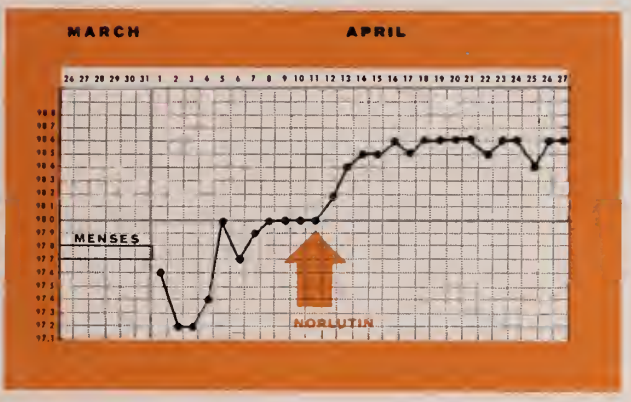
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in disorders of menstruation and pregnancy



NORLUTIN: Progestational Effect on Endometrium "...10 mg. [NORLUTIN] given twice daily represents a reproducibly effective dose in women for the production of marked progestational changes in the endometrium."[3]

Presecretory to secretory endometrium after 5 days treatment.



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1. Fern leaf pattern. 2. Arborization completely abolished by NORLUTIN.

NORLUTIN: Induction of Withdrawal Bleeding "As little as 50 mg. of [NORLUTIN] administered in divided doses over a five-day period was sufficient to induce withdrawal bleeding."[2]

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PARKE, DAVIS & COMPANY · DETROIT 32, MICHIGAN

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Combined Estrogen-Androgen Therapy Proved 96% Effective in Preventing Postpartum Breast Engorgement[1]

Dual Steroid Approach also Successful in Osteoporosis

Of more than 4 million babies born in the United States this year, approximately 75 per cent will not be breast fed.[2] Combined estrogen-androgen therapy will effectively suppress lactation and prevent postpartum breast engorgement in these mothers.

Osteoporosis also ranks high on the list of present day medical problems because of the increasing older population.

In either condition, combined estrogen-androgen therapy produces a complementary metabolic response with little or no side effects.

In postpartum breast engorgement the rationale of therapy is explained as follows: During pregnancy, the high estrogen titer exerts an inhibitory effect on the anterior pituitary, thereby preventing the release of the lactogenic hormone, prolactin. Postpartum, the estrogen level drops off suddenly, and allows the release of previously inhibited prolactin which is now free to initiate the flow of milk. Sex hormones re-establish pituitary inhibition, thus arresting the lactating process.

In Fiskio's study,[1] "Premarin" with Methyltestosterone effectively relieved postpartum breast engorgement and suppressed lactation in 96.2 per cent of his group of 267 patients. Notably absent were breast abscesses, nausea, vomiting, excessive lochia, withdrawal bleeding or virilization. Menses were re-established after the normal six week period. The lack of mental depression during the puerperium was especially gratifying.

Osteoporosis results from impairment of osteoblastic activity, and gonadal hormone decline is possibly the most prevalent cause. Estrogen stimulates osteoblastic activity and increases calcium and phosphorus retention, while androgen exerts an anabolic or protein-forming action. Prognosis for bone recalcification is good, providing therapy is continued for extended periods. The possibility of side effects is minimized because the two hormones exert an opposing action on sex-linked tissue.

Estrogen and androgen as combined in "Premarin"® with Methyltestosterone provide a treatment of choice in osteoporosis.

Recommended Dosage: (Directions refer to *yellow* tablets.)

Postpartum breast engorgement — Short duration therapy — (one week) — 3 tablets every four hours for five doses — then 2 tablets daily for rest of week. "Step-down" therapy — (10 to 15 days) — 1st day — 4 tablets; 2nd day — 3 tablets; 3rd day — 2 tablets; thereafter, 1 tablet daily for 10 to 15 days. *It is important to start therapy as soon as possible after delivery.*

Osteoporosis: 2 tablets daily, for the first three weeks. Then 1 tablet daily thereafter. In the female, it is suggested that combined therapy be given in 21 day courses with a rest period of about one week between courses, and be continued for 6 to 12 months; following this period, the patient may be maintained with cyclic therapy employing "Premarin" Tablets alone.

Supplied in two potencies: *Yellow tablets* — each contains 1.25 mg. conjugated estrogens, equine ("Premarin") and 10 mg. methyltestosterone. *Red tablets* — each contains 0.625 mg. and 5 mg. respectively. Bottles of 100 and 1,000.

Bibliography: Available on request.

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Knox "Choice of Foods" Diet Can Help Your HYPERTENSIVE Patients to Reduce and Stay Reduced



1. Color coded diets of 1200, 1600 and 1800 calories are based on nutritionally tested Food Exchanges.[1]

2. The easy-to-use Food Exchanges (called Choices in booklet) simplify diet management by eliminating calorie counting.

3. Diets promote accurate adjustment of caloric levels to the special needs of the patient yet allow each individual considerable latitude in the choice of foods.

4. More than six dozen appetizing, low-calorie recipes are described in the last fourteen pages of the diet booklet.

1. The Food Exchange Lists referred to are based on material in "Meal Planning with Exchange Lists" prepared by Committees of the American Diabetes Association, Inc., and The American Dietetic Association in cooperation with the Chronic Disease Program, Public Health Service, Department of Health, Education and Welfare.



Chas. B. Knox Gelatine Co., Inc.
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Please send me ..... dozen copies of the new, illustrated Knox Reducing booklet based on Food Exchanges.

Your Name and Address.

THE CHALLENGE:

Can a cigarette be made that will give signi-cantly superior filtration—at least 40% effecti e —and also give easy draw with full, natu l tobacco flavor?

As manufacturers of the first modern filt r cigarette, P. Lorillard Company has long shar d the hope for such a cigarette. At the Lorilla Laboratories, an intensive search for seve l years has at last led to the answer...

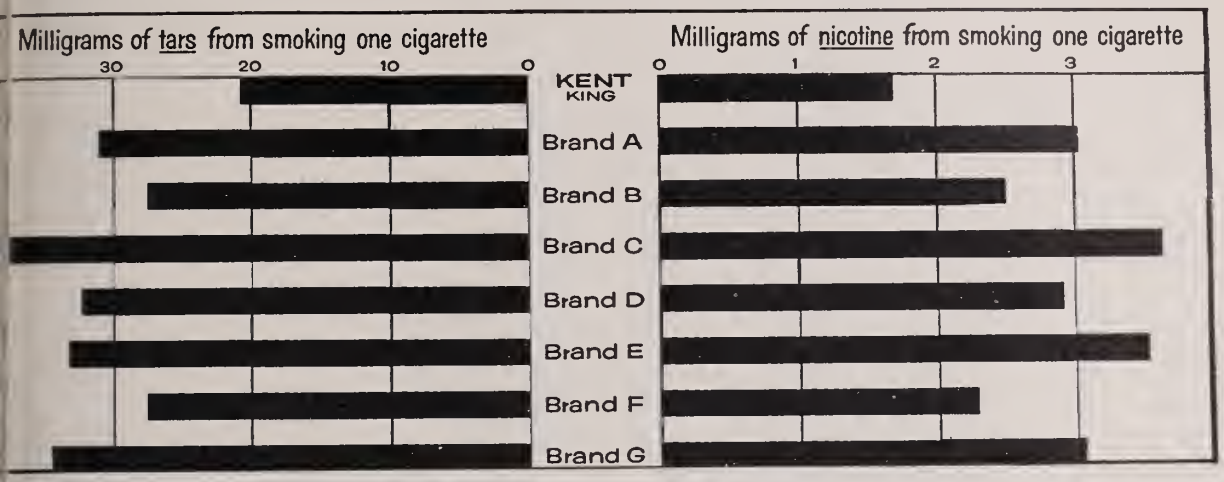
THE ANSWER:*

KENT with the NEW exclusive Micronite Filte

offers significantly superior filtration — bett than 40%... significantly less tars and nicotir ...than any other leading filter brand.

And it offers this, plus easy draw...and th full rich flavor of the world's finest premiu quality natural tobaccos.

ROOF of significantly less tars and nicotine in KENT



NT REGULAR (NOT SHOWN ON CHART): 17.0 MGS. OF TARS: 1.36 MGS. OF NICOTINE.

ased on tests by Lorillard Research Laboratories. Substantiated by comparable results from three tionally known independent research laboratories.

ent is definitely not just another "taste good" garette with a token filter.

P. Lorillard Company has been able to develop a cigarette with significantly superior ltration. Kent with the NEW exclusive Micronite Filter offers significantly less tars and icotine in the mainstream smoke, yet is a fully atisfying cigarette.

Broad-sample tests with smokers show Kent's arefully-selected, custom-blended natural tobaccos come through rich and full-flavored. On aboratory draw-meters, Kent registers in the ptimum range for easy draw.

We sincerely believe you will find Kent with he NEW exclusive Micronite Filter a thoroughly satisfying filter cigarette on every count. We cordially invite your further inquiry.



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WHENEVER COUGH THERAPY IS INDICATED

Hycodan®

(Dihydrocodeinone with Homatropine Methylbromide)

■ Relieves cough quickly and thoroughly ■ Effect lasts six hours and longer, permitting a comfortable night's sleep ■ Controls useless cough without impairing expectoration ■ rarely causes constipation ■ And pleasant to take

Syrup and oral tablets. Each teaspoonful or tablet of HYCODAN* contains 5 mg. dihydrocodeinone bitartrate and 1.5 mg. Mesopin.† Average adult dose: One teaspoonful or tablet after meals and at bedtime. May be habit-forming. Available on your prescription.

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NEO-SYNEPHRINE® COMPOUND

Cold Tablets

offer "Syndromatic" Control in the COMMON COLD, Allergic Rhinitis

Patients breathe, sleep, work and play better with new "syndromatic" action.

Neo-Synephrine Compound Cold Tablets... for... Full "Syndromatic" Relief.

Neo-Synephrine (brand of phenylephrine) and
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Neo-Synephrine Compound *Cold Tablets*

protect patients through the full range of symptoms

Each tablet contains:

NEO-SYNEPHRINE HCl, 5 mg.

Mild, long acting decongestive

controls **NASAL STUFFINESS, RHINORRHEA**

Acetaminophen, 150 mg.

Effective analgesic and antipyretic

relieves **HEADACHE AND ASSOCIATED ACHES AND PAINS**

Thenfadil® HCl, 7.5 mg.

Dependable, well tolerated antihistaminic

neutralizes **ALLERGIC SENSITIZATION**

Caffeine, 15 mg.

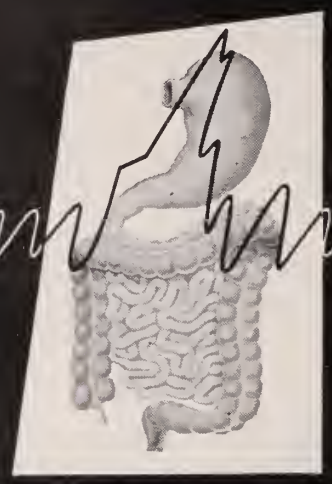
counteracts **MENTAL AND PHYSICAL LASSITUDE**

Dose: **Adults**—2 tablets three times daily.
Children 6 to 12 years—1 tablet three times daily.

Bottles of 100 tablets

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NEW YORK 18, N. Y.

in spasticity of the GI tract



Pavatrine®
125 mg.
with Phenobarbital
15 mg.

- *is an effective dual antispasmodic*
- *combining musculotropic and neurotropic action plus mild central nervous system sedation for "the butterfly stomach."*

dosage: one tablet before each meal and at bedtime.

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V stands for—greater antibio

blood levels • faster broad-spectr

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is a new and superior form o

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ACHROMYCIN V Capsules a

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oral broad-spectrum

ACHROMYCIN V is now available in—**CAPSULES.** (Pink) 250 mg., 100 mg. (tetracycline HCl equivalent phosphate-buffered.) **SYRUP.** Each teaspoonful (5 cc.) of orange-flavored syrup contains 125 mg. of tetracycli HCl activity, phosphate-buffered. **LIQUID PEDIATRIC DROPS.** Each cc. (20 drops) contains 100 mg. tetracycline HCl activity, phosphate-buffered. (Approx. 5 mg. per drop). Orange Flavor. Plastic dropper-type bottle of 10 c

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Tetracycline Buffered with Phosphate

CHROMYCIN* Tetracycline—the

ntibiotic, noted for its effectiveness

0 different infections. New

pid-acting, offer an average of

n half the time—unsurpassed

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HROMYCIN V dosage: 6-7 mg. per lb. of body weight per day for children and adults.

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ERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK Lederle



your patients with generalized gastrointestinal complaints need the comprehensive benefits of

Tridal®

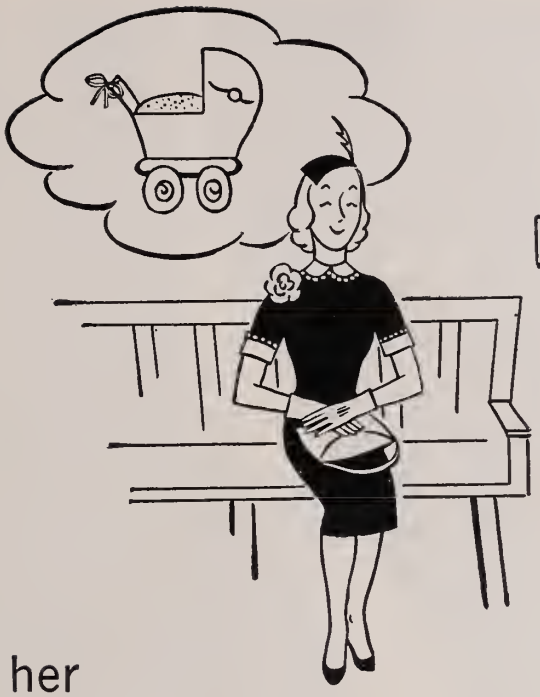
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rapid, prolonged relief throughout the G.I. tract
with unusual freedom from antispasmodic
and anticholinergic side effects

One tablet two or three times a day and one at bedtime. Each TRIDAL tablet contains 50 mg. of Dactil, the *only* brand of N-ethyl-3-piperidyl diphenylacetate hydrochloride, and 5 mg. of Piptal, the *only* brand of N-ethyl-3-pipendyl-benzilate methobromide.

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14357



assure her

a more serene, a happier pregnancy

. . . without nausea

give her **'MAREDOX'®** brand

Cyclizine Hydrochloride and Pyridoxine Hydrochloride

because 'Maredox' gives the expectant mother new-found relief from morning sickness.

relieves nausea and vomiting
and
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Each tablet of 'Maredox' contains:
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In the nonhormonal treatment of arthritis and allied disorders no agent surpasses BUTAZOLIDIN in potency of action.

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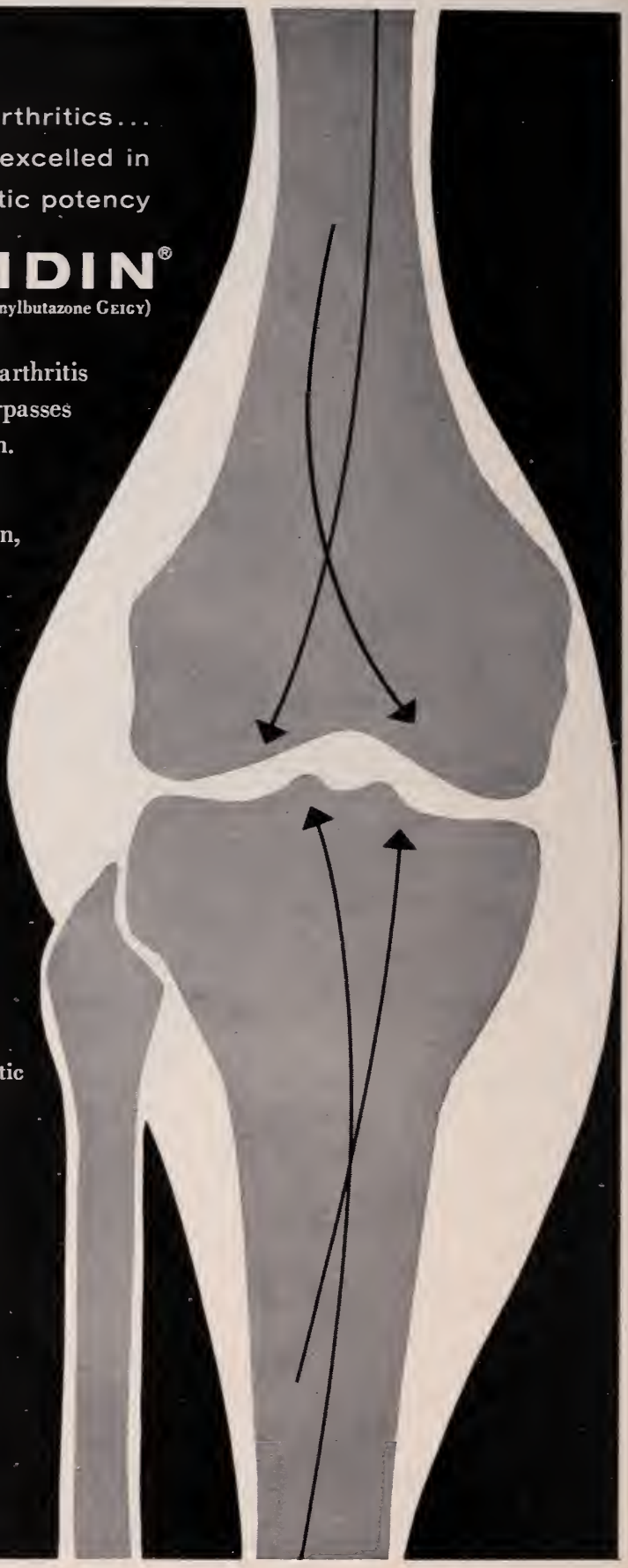
BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for detailed literature before instituting therapy.

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GEIGY

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- to correct many common anemias
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the Priceless Ingredient

Each teaspoonful (5 cc.) supplies:

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Niacinamide	5 mg.
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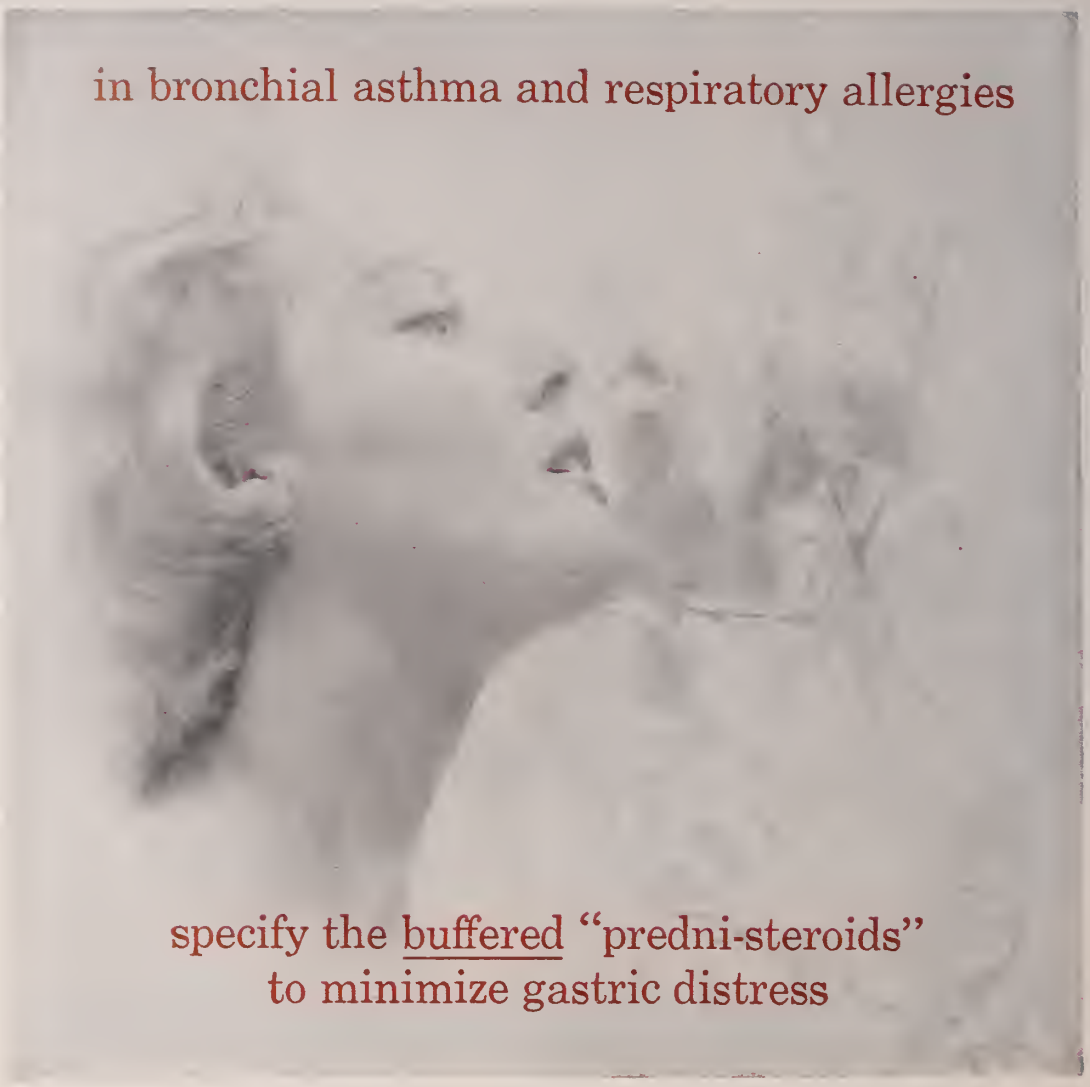
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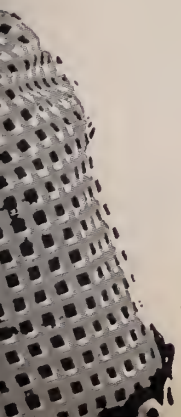
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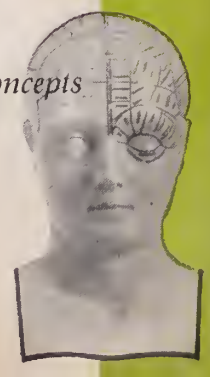
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The Virginia
MEDICAL
MONTHLY

September, 1957
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Guest Editorial....

Editorial "We"—Chronic Disease

AMONG CERTAIN endemic conditions seemingly on the increase in Virginia is the steady expansion by physicians of the use of the editorial "We".

For the uninformed, this refers to the use by a physician usually in practice alone who, in discussing his medical responsibilities, refers to himself as "We". Example of this. A physician in practice alone discusses the patient's examination with the patient. The physician says, "We find you to have so and so. We feel that you should take these tablets. We would like to see you in a week. If you need anything in the meantime, be sure to call us."

The single author of a recent paper appearing in this journal uses "We" when discussing his cases. The use of "We" must be confusing to the patient and others. Who are "We"? Does this mean that the doctor's secretary has confirmed the diagnosis and concurs in his proposed management? Does the doctor have some unknown "Ghost" advisors who are surreptitiously advising him? Is it the M.D.'s wife, mother-in-law or the latest issue of *Reader's Digest* or *Time* magazine who compose this mysterious medical panel?

Obviously nothing like this happens. The "We" usage is strictly a habit or an attempt to reassure the patient of the brotherhood of man and that "We" are in this thing together. This may be reassuring to some people. "We" find it irritating. Actually some patients encourage a similar exchange when they ask, "How are we doing today, Doctor?". They are referring to the "We" of the doctor and the patient, a team concerned with the common problem of the patient's condition.

The real editorial "We" being discussed refers to the annoying allusion to some nebulous and mysterious group of individuals in contact with the physician when clearly he is working alone and has the prime responsibility for the patient.

The use of the editorial "We" has a long history. H. L. Menken, in his authoritative Supplement I of his *The American Language*, gives this explanation from early newspaper history. "It is essential for newspaper writing because people are liable to be horsewhipped for what they put in the sacred columns of a daily journal. 'We' may represent a vague number of individuals less inviting and safer from the horsewhip."

Could it be that physicians seek to evade some responsibility for his patient through this device? Perhaps not but "we" wonder.

Would not it seem appropriate in talking with patients to use other devices; such as, "It seems. It appears. I think. I believe".

Mark Twain has been quoted as having said in effect, "The editorial 'We' traditionally and historically is reserved for the exclusive use of heads of state, editors and people with tape worms." Anthelmintics—anyone?

R. Coleman Longan, Jr., M.D.

Percutaneous Renal Biopsy

E. LOVELL BECKER, M.D.
ALLAN M. UNGER, M.D.
Richmond, Virginia

THE TECHNIQUE for percutaneous renal biopsy has been described by Castleman and Smithwick[1] and for aspiration biopsy by Iversen and Brun[2]. Further modifications in their techniques have been put forth by Kark and Muehrcke[3] and their associates in Chicago. There have now been several thousand biopsies performed with no mortality and only occasional cases complicated by serious bleeding. Performance of biopsy requires one of the several types of biopsy needles depending upon the preference of the operator. In Figure I, three types of the Vim Silverman needle are

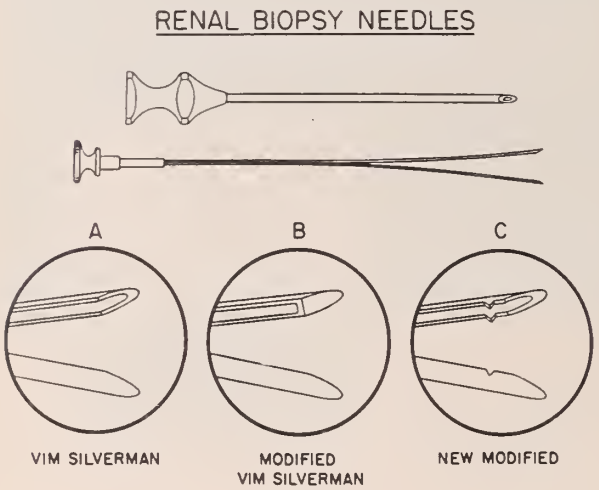


Figure I

shown: The standard Vim Silverman needle used widely for liver biopsy; the Franklin modification of the Vim Silverman, in which the blades have a solid tip to facilitate holding the tissue; and a modification used in our laboratory which consists of an interdigitating tooth at the end of the cutting blade to help hold biopsy specimens. These are 17 gauge, thin wall needles approximately 8 inches long.

Pre-biopsy studies are done to rule out bleeding dyscrasias and to localize the kidneys. Determinations are made of bleeding and clotting time, prothrombin time, prothrombin consumption and platelet count. As a precaution, the patients are typed and cross-matched, and 1000 ml. of whole blood is prepared. The kidneys are outlined by x-ray using a KUB film or, if necessary, an excretory urogram. Measurement is made from the spinous process to the lower border of the twelfth rib where it crosses the kidney, which gives a good approximation as to the biopsy site. Either kidney may be biopsied.

The patient then is placed in the prone position with a small sandbag in the suprapubic area. The back is carefully prepared with antiseptic solution. The biopsy area is infiltrated with 1% procaine and an exploring 22 gauge spinal needle is inserted and a local anesthetic is injected. The needle is advanced until it enters the renal substance and swings freely with respiration (Figure II).

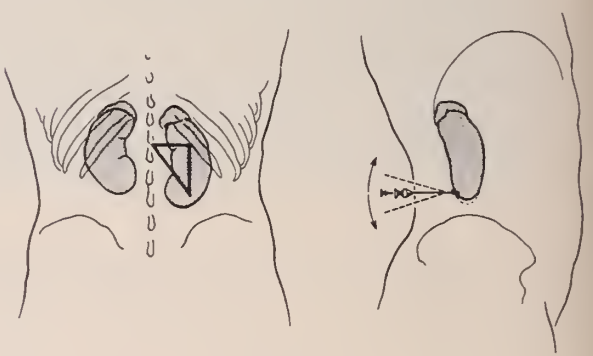


Figure II

The kidney, being a retroperitoneal structure close to the diaphragm, moves with respiration so that the needle tip moves with the kidney causing the hub to swing. It is important that the needle not be held rigid while the patient is breathing as it may tear renal tissue. The depth and direction of the exploring needle is noted, and the Vim Silverman sheath and stylet is inserted in a similar manner. With the patient holding his breath, the stylet is removed and the cutting blades are then introduced. The sheath is promptly advanced over the blades and rotated 360°. The tissue is removed immediately and fixed in Zenker's Solution. The needle may then be rinsed in a culture media, although in our experience these cultures have been uniformly sterile.

From the Department of Medicine, Medical College of Virginia.
E. LOVELL BECKER, M.D., *Scholar in the Medical Sciences, John and Mary R. Markle Foundation.*

CONTRAINDICATIONS

Abnormalities in bleeding or coagulation tests are a contraindication to biopsy. In patients with only one kidney, biopsies are not attempted. In complete anuria or renal shutdown, biopsy has been carried out when it appears necessary to establish a diagnosis, but in these cases a ureteral catheter is placed in the renal pelvis and the pelvis is irrigated with a bicarbonate solution to prevent the formation of blood clots which might further compromise the already damaged kidney. Patients with renal abscesses, perinephritis, or lesions of tuberculosis are not considered good candidates. In rapidly advancing uremia and the malignant state of hypertension, renal biopsy is contraindicated because of the possibility of bleeding or hemorrhage. Renal carcinomas are not intentionally biopsied as there could be spread of carcinoma cells.

VALUE OF BIOPSY

Renal biopsy is one method by which an accurate pathological diagnosis can be made in the nephrotic syndrome, Kimmelstiel-Wilson's disease, collagen disease, nephro-calcinosis, tubular or cortical necrosis and in other renal diseases. In the various forms of glomerulonephritis there is fairly uniform involvement of nephrons so that one is justified in drawing conclusions from a small tissue specimen. However, there are a number of conditions where the renal lesions are not uniform and in these cases interpretation must be made with caution.

Biopsy is useful in outlining treatment in pyelonephritis, nephrotic syndrome, and collagen disease.

Tissue obtained at biopsy is better preserved than that obtained at autopsy. Biopsy specimens show distinct cellular details and fine delicate membranes.

FUTURE OF RENAL BIOPSY

Percutaneous biopsy now permits fresh tissue to be obtained from human subjects. Electron microscopy of these specimens will enable the experimental cytologist to elucidate normal and pathological conditions. Further, by this technique new fields are opened for the study of kidney enzymes, metabolism and histochemistry.

Undoubtedly renal biopsy will be done more frequently as its value is realized and the technique becomes more widespread. There is a definite risk associated with renal biopsy, but with careful screening of patients, attention to details and post biopsy observation, morbidity can be kept at a minimum. This procedure is and should be reserved for those patients in whom definite indications exist and from whom valuable information will be derived.

SUMMARY

The technique, indications and contraindications for percutaneous renal biopsy are presented. The value of this biopsy material in diagnosis and management of kidney disease has been discussed. This procedure is not without risk and should not be undertaken without complete knowledge of the technique and cognizance of the dangers.

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Let's Reminisce!

During 1874, the Medical Colleges of the United States graduated 3,000; during the same period, Germany graduated 660. The population of the former country is estimated at 40,000,000; of the latter 42,000,000. (Virginia Medical Monthly, May 1875)

Management of Chronic Congestive Failure and Angina Pectoris in Geriatric Patients with Choline Theophyllinate*

JURIJ T. I. PELECH, M.D.
Alexandria, Virginia

SINCE ITS INTRODUCTION in 1905, theophylline administered intravenously or per rectum has proven to be an effective coronary and bronchodilator, as well as diuretic agent. Unfortunately, these routes are often inconvenient and, in some cases, even toxic; fatalities have been reported following such use[1]. Unfortunately, oral forms of xanthines do not produce uniform therapeutic results because of gastric intolerance and uneven absorption from patient to patient. They are, also, not absorbed sufficiently to produce adequate relief in the acute attack. Consequently, much time and effort has been devoted to developing theophylline preparations which will provide adequate therapeutic effects without the drawbacks of the presently available preparations.

Aminophylline, an addition compound of ethylenediamine and theophylline, rather than a true salt of the two, and theophylline, have in the past been combined with a variety of preparations such as aluminum hydroxide, sodium glycinate, etc., in an effort to reduce gastric side effects. None of these, however, have been reported to be a significant improvement over the enteric-coated aminophylline preparations. A chemical approach to the problem was the reaction of theophylline, a weak acid with some strong base which would produce a stable, soluble, well absorbed salt of theophylline. The result of such a reaction is the choline salt of theophylline (choline theophyllinate) which was reported in 1954[2] to be a well absorbed and relatively nontoxic xanthine preparation.

Pharmacologically, choline theophyllinate possesses the desirable action of other xanthines[3]. Clinically, it provides adequate relief of bronchospasm[4] and satisfactory diuresis[5], without seeming to produce any gastric irritation, for early studies showed it to be as well as, or better absorbed than aminophylline and with far fewer gastrointestinal symptoms[6]. Clinically, Brown[7] and Simon[8] demonstrated objectively and subjectively that choline theophyllinate was an effective preparation for the treatment of chronic bronchitis and emphysema. Simon[8] showed its value in geriatric patients with chronic lung disease. Batterman[9] reported that this preparation produced a diuretic effect in patients with congestive heart failure. This was evidenced by a reduced need for mercurial diuretics. Batterman[9] also reported that angina pectoris patients treated with choline theophyllinate did not require as much nitroglycerine and other coronary dilators as prior to this therapy. No evidence of drug resistance was found even over long periods of treatments (2-3 years). Recently, Luisada[10] confirmed the effectiveness of this new xanthine in angina pectoris, by means of a double blind study in which the exercise tolerance was employed to demonstrate objectively in his patients possible changes in cardiac status. Because of the apparent clinical value of this new oral preparation and the high degree of gastric tolerance we were interested in determining whether or not it would be effective orally for ambulatory geriatric patients with angina pectoris and/or congestive failure, as well as with chronic pulmonary disease.

PLAN OF STUDY

It was necessary to employ the double blind technique to avoid any possible psychologic influence, both on the part of the physician and that of the patients. Patients who attended the medical clinic of the Community Health Center and those hospitalized were studied. The drugs were separated into three groups labeled A, A_2, B, B_2, C and C_2, each group of which contained a placebo as well as the active agent. The patients were kept on each group

*Cholodyl®Nepera Laboratories, Morris Plains, N. J.
JURIJ T. I. PELECH, M.D., *Resident in Medicine, Alexandria Hospital, Alexandria.*

This paper was presented at the Annual General Staff Meeting, June, 1956 and was awarded the Betty D. Speck Memorial Prize. The study was conducted at the Alexandria Community Health Center in the Department of Internal Medicine under the direction of Dr. Ben C. Jones, Jr.

for a period of one month before being crossed over to the next. Over a period of six months every patient received the placebo for at least 3 months, and the choline theophyllinate for an equal period. In order to eliminate guessing which was which, the drugs were not labeled in alternating order, but were administered in haphazard order. The schedule was so arranged that half the patients were started on placebo and the other half on the active drugs, but neither physician, patient, nor the nurse distributing the drugs knew which was which.

There was no difference in appearance or taste between the tablets. The patients were not told that they were receiving a test drug. Both choline theophyllinate and the placebo were administered in the same dosage throughout the study—one tablet q.i.d. (The dose of choline theophyllinate was 200 mgm q.i.d. except in severe chronic pulmonary disease, where the dose was increased up to 400 mgm q.i.d.) The results herein reported include only those twenty-five patients who were followed for at least six months. At least 40 others were started but continued therapy only for periods of one to five months. Another 25 patients received only choline theophyllinate, as they were too ill to be treated with placebo medication.

Every patient went through a complete physical examination prior to being started on the medications. This included a thorough history, hemogram, urine analysis, ECG, and chest x-ray to determine the size of the heart and presence of pleural fluid. Weight determinations were used to estimate the presence and severity of edema. These findings were recorded on each visit. Any change following treatment would therefore indicate (on an objective basis) the effect of the preparation received. The placebo acted as a baseline as well as a means of ruling out any psychologic effect of the medication. At the same time several symptoms were carefully recorded on which to base any subjective improvement. These were (1) dyspnea (at rest and on exertion), (2) angina (number of attacks per day and severity), (3) nocturia, and (4) need for other medications.

THE PATIENTS

The group included ten males and fifteen females, between the ages of 55 to 81 years (the average was 62 years). There were thirteen patients with arteriosclerotic cardiovascular disease, four of whom had moderate hypertension, ten with hypertensive cardiovascular disease, most of whom showed some arteriosclerosis, one with rhematic heart disease and one with luetic heart disease. All of the patients with arteriosclerotic cardiovascular disease, except one, had angina pectoris and required varying amounts of nitroglycerin. Among the group of twenty-five, there were eleven patients with pulmonary emphysema and/or bronchiectasis. Four of these people had acute bronchospastic episodes which required intravenous or rectal aminophylline, as well as aerosol therapy. This group of geriatric patients, in addition, presented other chronic illnesses such as diabetes mellitus, obesity, cholelithiasis, chronic kidney disease, (occasionally with azotemia and anemia), secondary polycythemia, previous cerebrovascular accidents, etc., in addition to this cardiac and pulmonary problem. All the patients were on a restricted salt intake (1-3 grams daily). The majority had moderate or marked chronic congestive heart failure and received a maintenance dose of digitalis; some required occasional or frequent mercurial diuretics and had been on such medication for as long as two years prior to the study. Those with arterial hypertension were on antihypertensive drugs as indicated. All but four of the group previous to this study had a history of one or more hospitalizations.

RESULTS

The majority of this group presented, in general, the same complaints. For this reason, we paid special note to these few and restricted the basis for overall therapeutic effects and our clinical impression primarily to the improvement or change in severity of these complaints, as they could be taken as representing the clinical status of our patients. Table I summarizes the signs and symptoms to which we paid particular attention.

The overall therapeutic effects obtained by patients with congestive heart failure are demonstrated in Table II, while Table III, shows the effect of need for mercurial diuretics in these patients when on choline theophyllinate as compared to their requirements when on placebo.

In addition to fewer attacks of angina pectoris (see Table I) choline theophyllinate appears to have reduced the need for nitroglycerin, as shown in Table IV.

Another objective manifestation of the effectiveness of choline theophyllinate was the fact that of the eight of these severely and chronically ill patients requiring hospitalization during the period of therapy, six had been on placebo and only two on choline theophyllinate.

A second group of patients (about 25) with chronic heart failure were treated only with choline

Table I

Change in Various Clinical Signs and Symptoms

Results	Dyspnea		Angina		Edema		X-ray of Chest		Nocturia		Weight Loss	
	With Placebo	With Choledyl	With Placebo	With Choledyl	With Placebo	With Choledyl	With Placebo	With Choledyl	With Placebo	With Choledyl	With Placebo	With Choledyl
Worse	9	1	6	0	3	..	6	..	6	..	..	..
No change	15	4	12	3	21	10	19	9	18	13	24	18
Slightly improved	1	7	1	4	1	5	..	4	1	3	1	3[1]
Moderately improved	0	9	0	8	..	10	..	9	..	7	..	4[2]
Markedly improved	0	4	0	4	..	..	..	3	..	2	..	..

[1]Up to 10 pounds.
[2]Over 10 pounds.

Table II

Overall Effects of Medication in Congestive Heart Failure

	With Placebo	With Choline Theophyllinate
Markedly improved	1	6
Moderately improved	1	8
Slightly improved	2	5
No change	7	1
Worse	12	1

Table III

Need for Mercurial Diuretics During Therapy

	With Placebo	With Choline Theophyllinate
Eliminated	0	3
Greatly reduced	0	5
Reduced below 50% of previous level	2	5
Same	13	2

Table IV

Need for Nitroglycerin During Therapy

	With Placebo	With Choline Theophyllinate
Eliminated	0	9
Decreased 50%	5	7
No change	14	3

theophyllinate, in addition to their regular regimen, and were never put on placebo medication. These patients were considered too ill to be placed on placebo medication. Most of them appeared to be benefited when placed on this oral xanthine. Five patients, three of whom were not included in any of the previously mentioned group were studied to see if any demonstrable effect could be obtained on circulation time and venous pressure. In three of the five cases the increased venous pressure and delayed circulation time appeared to be nearing normal and continued to improve during 16 weeks of therapy. In one of the remaining two cases, there was no improvement in these functions, while in the last case, the tests were inconclusive as the measurements were not reproducible.

An observation made in the blind study group was the apparent "synergistic effect" obtained following the combining of choline theophyllinate with other drugs. Some of our hypertensives received rauwolfia alkaloids. With the addition of 200 mg. q.i.d. of choline theophyllinate to their otherwise unchanged regimen, additional hypotensive effect was observed. Most of the congestive heart failure patients treated with known choline theophyllinate were also receiving injections of a mercurial diuretic at the time the new agent was added to their regimen. The addition of this oral preparation reduced the need for mercurial diuretics. This seems to corroborate a similar observation made with rauwolfia and choline theophyllinate[11].

Side effects (in both the known and unknown treatment groups) were rare. Two patients complained of nausea and indigestion, one of whom later proved to have cholelithiasis. On the other

hand there were cases with known cholelithiasis and past history of recurrent peptic ulcer who tolerated the choline theophyllinate very well. In one instance the symptoms were severe enough to warrant discontinuation of the drug. Patients occasionally complained of heart palpitation, but this reaction was reported during the placebo period as well. Most of the patients were in the geriatric age group and therefore probably arteriosclerotic, but not necessarily senile, and most could be depended upon to give rather accurate reports of their symptoms.

DISCUSSION

We believe that the use of the double blind technic is a clear demonstration of the probable therapeutic value of this new oral xanthine. It appears to lessen the number and severity of attacks of angina pectoris. It is generally well known that in this type of patient placebo medication often produces therapeutic benefits. Since each patient was followed for at least six months and received placebo for half that period we believe that results are equivalent to those that would be obtained in a series of 75 patients treated for a single month with the placebo and a single month with the active drug. Part of the subjective improvement reported by the patients was that they were able to walk longer distances and tolerate greater activity.

This oral salt of theophylline was extremely well tolerated. One 200 mgm tablet q.i.d. reduced the need for other diuretics. In geriatric patients with signs of congestive failure, therapy reduced dyspnea, prevented rapid formation of edema and reduced nocturia.

Choline theophyllinate is a prophylactic agent proving useful in decreasing the occurrence of signs and symptoms of congestive failure, angina and bronchospastic attacks. Those patients receiving other medications such as nitroglycerin, mercurial diuretics and hypotensive agents, apparently received a potentiation effect from the choline theophyllinate as they required much less of the medications than prior to receiving this agent. This effect was particularly noted in patients receiving rauwolfia alkaloids.

SUMMARY

1. Choledyl[R] is a useful supportive drug for elderly patients with chronic congestive heart failure, angina pectoris and chronic pulmonary disease (emphysema and/or bronchiectasis) in our study of 25 patients in a double blind study and 85 others receiving the known drug.

2. Choline theophyllinate is well tolerated orally, even in large doses (400 mg q.i.d.) over long periods of time, and mild side effects occur very rarely.

3. There is no decrease that can be detected in the effectiveness of the drug after as long as seventy weeks of therapy.

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Alexandria, Virginia

Infant Mortality

If 1915 mortality rates had prevailed last year, Health Information Foundation points out, an additional 300,000 of the four million babies born alive would not have lived to celebrate their first birthday. Forty years ago, one in every ten babies born alive in this country was unable to survive the first year of life. Today the ratio has dropped to one in forty. Once an infant has survived the dangerous first week of life, the chances are nearly 100 to 1 that he will live to see his first birthday. Girl babies seem to be healthier than boy babies: In 1954, the mortality rate for male infants was 28 percent higher than for female infants.

Cryptenamine and the Toxemias of Pregnancy

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THE INCIDENCE of eclampsia is on the decline all over the United States The reason for this decline is felt to be better prenatal care with an increase in the number of hospital deliveries and a decrease in the number of home deliveries. However, any hospital in a rural area where a large number of deliveries are carried out on patients who have not bothered with prenatal care will be plagued by a higher number of hypertensive complications of pregnancy. The patient who presents herself in late pregnancy makes classification of her illness difficult. Normal blood pressures in early pregnancy giving away in the last trimester to elevations with edema, proteinuria, and rapid weight gain indicate preeclampsia as a general rule. It is in this patient who is seen in the last trimester that funduscopic examinations are of value. The presence of tortuosity and silver wiring of the arterioles with arteriovenous nicking and chronic exudative processes indicates a more chronic hypertensive condition. Mild increase in the arteriovenous ratios from a normal of 4 3 with a sheen of the retina (described as like headlights on a wet dark street) leads one to classify the condition as a more recent preeclampsia. Exacerbation of a chronic glomerulonephritis is sometimes impossible to diagnose in the last trimester until the puerperium when a fixed specific gravity, proteinuria, granular or hyaline casts indicate the damage done to the glomeruli. Dieckmann states that the patient whose blood pressure remains elevated two to four weeks after delivery probably is a latent hypertensive and he feels that these women cannot be classified until a period of time transpires and a follow-up blood pressure study is made. It is quite generally accepted that vasospasm is one of the key changes in toxemia[2]. The reason for the vasospasm is still conjectural and the authors feel that until the cause is found treatment of the vasospasm will be one of the chief aims of the therapy. The duration of this spasm more than the severity determines the degree of permanent vascular damage that is done. Vascular spasm accounts for cerebral, renal, adrenal, placental, and hepatic changes. Subretinal changes occur producing edema, spasm, and tortuosity.

Renal physiology is altered by decreased rate of glomerular filtration, reduced tubular absorption above the normal curve of expanded plasma volume and the cardiac output of pregnancy. Vascular spasm accounts for the reduced renal blood supply with intermittent ischemia, decreased glomerular filtration rate, and total renal plasma flow.

McCall has proven that cerebral blood flow, cerebral oxygen consumption and cerebral vascular resistance are identical in pregnant and non pregnant women. However, in pregnancy there is a relative lowering of oxygen and carbon dioxide volumes due to increase plasma volume and lowered hemoglobin concentration. Cerebral vascular resistance is increased in both convulsive and non-convulsive toxemias from vasospasm. Cerebral oxygen metabolism is lower in convulsive toxemias.

It will be recalled that, normally, blood pressure is regulated by (1) cardiac output and force, (2) blood volume, (3) viscosity of blood, and (4) peripheral resistance. Eighty to ninety per cent of cardiac output is to overcome peripheral resistance which is most responsible for hypertension. Therefore, drugs reducing peripheral resistance will offer the best means of combating a severe hypertensive crisis in late pregnancy. Spasm in the afferent glomerular arteriole varies from time to time and it is the release of this spasm which accounts for proteinuria. Red blood cells, white blood cells, and casts are usually not seen in toxemia of pregnancy. Non-protein nitrogen studies do not help in the classification of toxemias. Acidosis may occur with carbon dioxide combining powers as low as 22 volumes per cent. About half of the toxemia patients cannot concentrate urine and have reduced PSP excretion.

Veratrum preparations have long been known to produce a reduction in blood pressure. The chief disadvantage has been the fact that the therapeutic level is very close to the level at which nausea and vomiting occur when the crude alkaloid is used. However, the veratrum group has been broken down

From the Obstetrical Service of Clinch Valley Clinic Hospital.
Presented at a Staff Meeting of the Bluefield Sanitarium.

into specific alkaloids, one of which is the drug used in this series, namely, cryptenamine (Unitensin, manufactured by Irwin, Nessler Company). Its chief advantage as reported by McCall[2] is that it causes much less nausea and vomiting but depresses the blood pressure as effectively as the crude alkaloids. In addition to the blood pressure decline, there is an associated bradycardia. A transitory oliguria is frequently observed following veratrum medication.

The pharmacology of veratrum preparations is thought to be as follows[4]: vaso depression which results from a decrease in peripheral resistance and also from a reflex (von Bezold) with afferent tracts from the left ventricle through the vagus nerve to the cerebral centers of circulation. The efferent arc is thought to be through the autonomic nervous system since ganglion blocking drugs stop the depressive action. The cardio-decelerator action is felt to follow the same reflex pattern as with the vaso-depression. The efferent arc, however, is felt to vagal in origin since it is blocked out by atropine. Large doses are thought to release epinephrine leading to vaso pressor and cardio-accelerator action.

There is also thought to be a cardiotonic action similar to cardiac glucosides plus a diminution of glomerular filtration with transitory oliguria. Veratrum preparations do not cause postural hypotension as do the ganglion blocking drugs[4].

Cerebral vascular resistance is also reduced. The work of McCall[2,3] indicates that veratrum viride acts to reduce cerebral vascular resistance without interfering with cerebral blood flow or oxygen metabolism. Although blood viscosity, brain edema and an increased spinal fluid pressure are important, McCall, by use of nitrous oxide studies, has shown that augmented tone of the cerebral vessels is also important.

In 1952 the American Committee on Maternal Welfare established diagnostic criteria for the toxemias of pregnancy. These are as follows:

1—Acute toxemia of pregnancy

A—Preeclampsia

1. Mild
2. Severe

B—Eclampsia

II—Chronic hypertensive vascular disease with pregnancy

A—Without superimposed acute toxemia

1. Cases where hypertension is known to exist before onset of pregnancy
2. Cases of early hypertension before the 24th week.

III—Unclassified toxemias.

Preeclampsia is diagnosed by one of the following criteria.

1. Blood pressure of 140/90 or above or a rise of 30 mms. systolic or 15 mms. diastolic blood pressure.
2. Edema of hands or face or a weight gain of five pounds in one week.
3. Presence of albuminuria on two successive days.

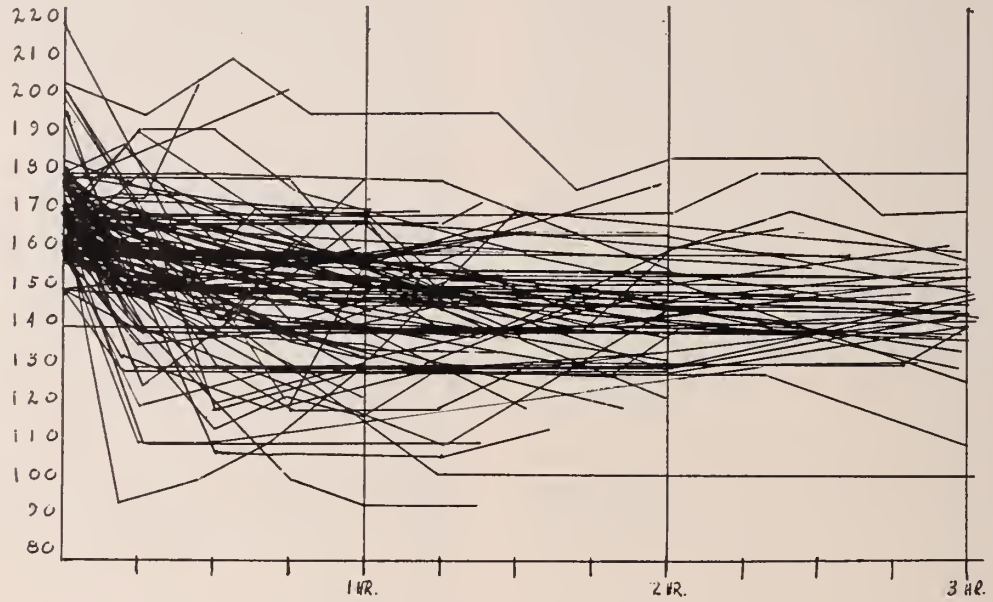
In this study we felt that the patients who were classified as severe preeclamptics would be treated with cryptenamine. We felt that intramuscular administration would better serve our purpose than intravenous, because the latter would require closer supervision than our hospital, not blessed with an interne or resident staff, could provide. We have between 750 and 850 deliveries a year with two obstetricians in attendance, and simplification of treatment is to their advantage. McCall feels that an intravenous mixture of cryptenamine and apresoline offers the best therapy, but we are convinced that our regime has provided excellent enough results so that we intend adhering to it.

These patients were admitted to the hospital, confined to bed except for bathroom privileges, placed on a salt free diet. Where treatment was prolonged, blood pressures were recorded three or more times a day, daily urinalyses were checked, blood NPN studies were made, and in some instances, where the tests were feasible, renal dilutions and concentration tests were made. They were admitted to the hospital and, unless it was felt that the treatment was an absolute emergency, they were usually treated with a half grain of phenobarbital four times daily and with bed rest while the blood pressure was observed. Diuretics were used in the form of Diamox and on several occasions they were given bland hypotensive drugs in the form of serpasil orally instead of phenobarbital. Fifteen minute blood pressure determinations were made in this series.

This is a series of 41 patients who received a total of 117 doses of cryptenamine. These doses varied from 1 cc. or 2 mgs. to 0.5 cc. or 1 mgs. Eighteen of the forty-one patients used were adequately treated by one dose of the drug. The largest number of doses used was in a primipara who re-

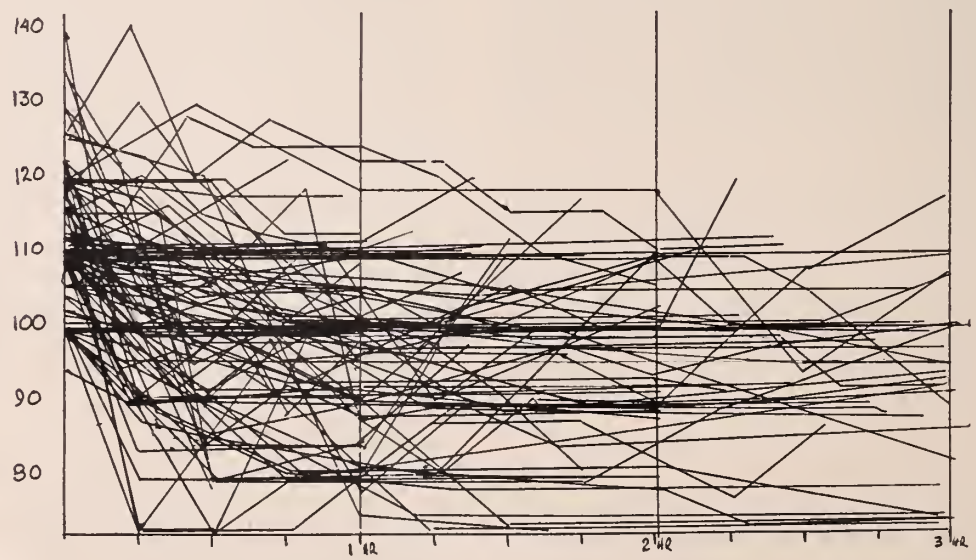
ceived fifteen doses of the drug over a period of several days until it was felt that induction could be safely carried out. One patient received eight doses over a period of several days and of the forty-one patients the average was 2.5 doses per patient. The large mastergraph (charts 1 and 2) reveals the degree of the rise or fall of the systolic and the diastolic blood pressures. Fifty-one per cent of the patients were primiparas, twenty-four per cent were grand multiparas. Thirty-six per cent of the patients were felt not to have received adequate prenatal care. Sixty-nine per cent of the group were felt to have preeclampsia. The remainder of the patients were hypertensive vascular diseases.

There were seven eclamptics in the group treated during this time. One (chart 3) patient received protoveratrine for three doses with no response but responded dramatically to cryptenamine with a forty point drop in systolic and a twenty point drop in diastolic before it rose again. The patient also received two other doses. Another eclamptic patient delivered twins and in the postpartum period



SYSTOLIC RESPONSE TO 112 DOSES CRYPTENAMINE

CHART 1



DIASTOLIC RESPONSE TO 112 DOSES CRYPTENAMINE

CHART 2

the pressure rose to 214/116 and she had five rapid convulsions. Two mg. cryptenamine was given and the blood pressure dropped to 156/90 in forty-five minutes. There were no poor results in the four patients who received cryptenamine in this series of eclampsia.

There were three cesarean sections in this group. One for an abruptio placenta with an unfavorable

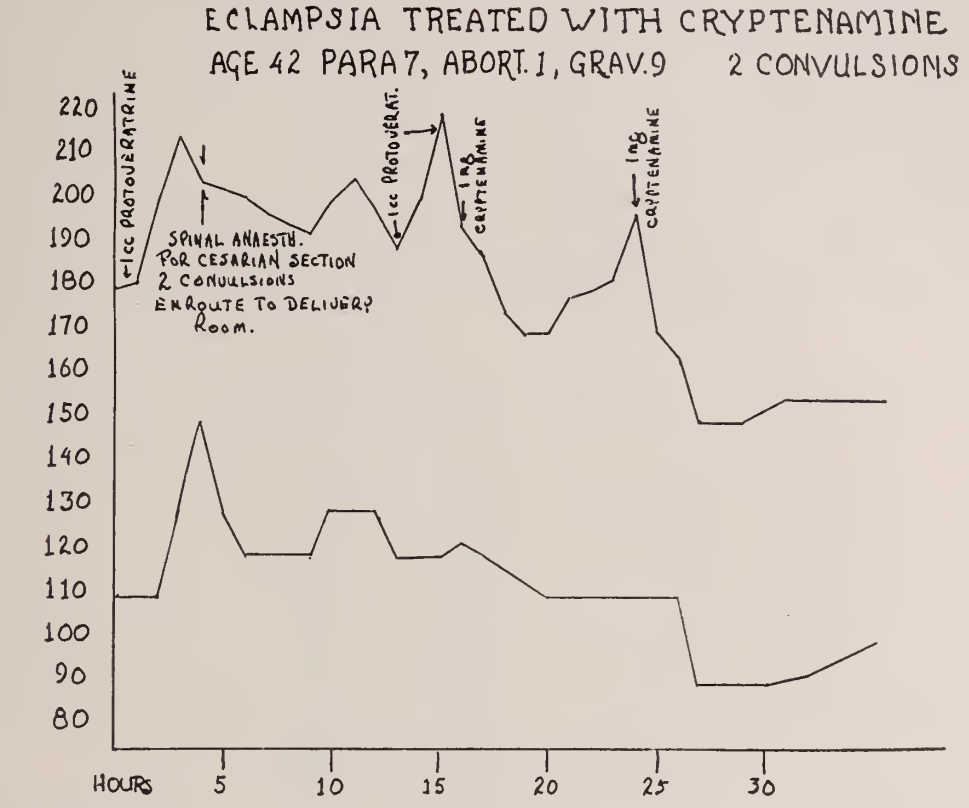


CHART 3

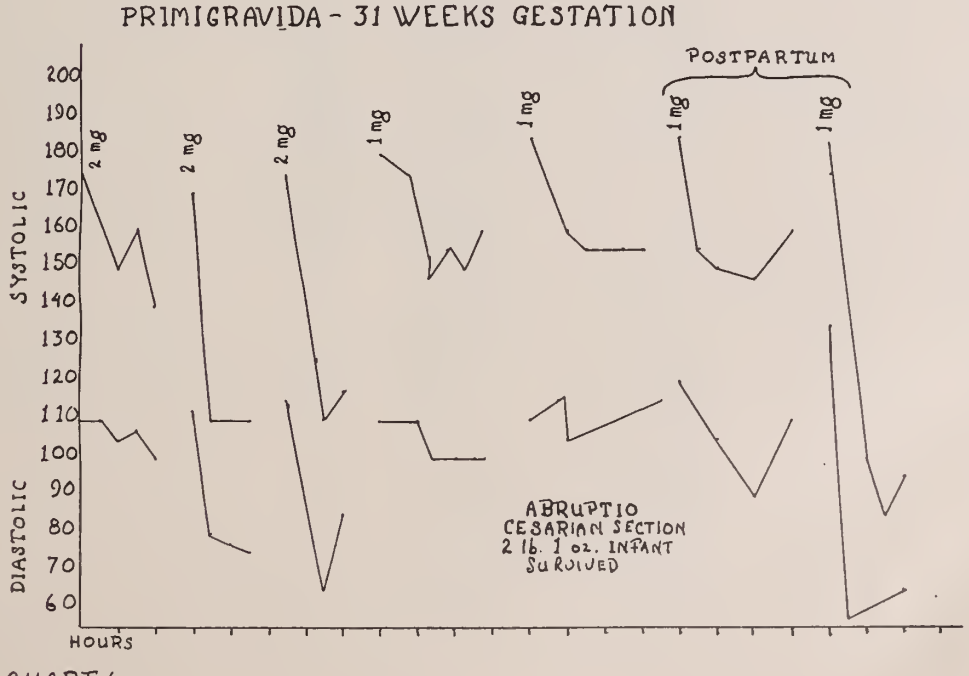


CHART 4

cervix (chart 4), with a premature baby, who received a prolonged hospital stay at close to viability in which a premature infant, 2 pounds 1 ounce, was delivered and survived; one was for a patient with no prenatal care whatsoever who was admitted to the hospital with a blood pressure of 180/115 with a severe abruptio who had an uneffaced, undilated cervix; and the other was for severe toxemia with uneffaced cervix and two convulsions. The remainder of the patients were delivered through the vagina with a pudendal nerve block anesthesia supplemented with trilene analgesia. There were no maternal deaths. There were two infant deaths or an infant mortality of 4.2%. One infant died of hyaline membrane disease; the other a congenital heart lesion. Both were proved at autopsy. There were, in 117 doses of the drug, only two patients who complained of nausea of any degree and only one of these had a mild episode of vomiting which subsided shortly after the administration of the drug.

Seventy-four of the 117, or 63% of the doses given had excellent response which meant a fall in systolic blood pressure of 16 mm. or more and a fall of diastolic pressure of 10 mm. within ninety minutes. Twenty-nine or 25% had a good response which meant 5-15 mm. systolic drop and up to 10 mm. diastolic drop in ninety minutes. Eleven per cent had a poor response. There were no cases of these

	Age	Race	Parity	Admission B.P.	Albumin	Doses	Excellent	Good	Poor
Mrs. J. H.	23	W	P 0 G I	164/112	30-40	7	3	4	
Mrs. H. H.	34	W	P VIII G IX	160/122	0	1	1		
Mrs. L. H.	20	W	P 0 G I	130/90	0	1		1	
Mrs. J. B.	37	W	P IV A IV G IX	160/104	25 mg.	3	1	2	
Mrs. A. B.		W	P 0 G I	130/90	625 mg.	2	2		
Mrs. C. J. B.	23	W	P II G III	158/90	0	1		1	1
Mrs. A. B.	41	W	P VII G VIII	200/120		6	4	1	
Mrs. P. L.	16	W	P 0 G I	170/100	30 mg.	1	1		
Mrs. B. M.	36	W	P V A III G IX	190/130	50 mg.	4	3	1	
Mrs. R. H. R.	20	W	P 0 G I	160/102	20 mg.	1	1		
Mrs. O. S.	20	W	P 0 G I	164/106	25 mg.	3	2		1
Mrs. G. S.	27	W	P 0 G I	170/104	0	3	1	1	1
Mrs. R. S.	42	W	P VI A III G X	178/112	20 mg.	5	5		
Mrs. H. V.	21	W	P 0 G I	160/88	0	5	1	3	1
Mrs. F. W.		W	P I G III	120/78	0	2	1		1
Mrs. W. W.	22	W	P 0 G I	154/96	0	1	1		
Miss E. V.	25	W	P 0 G I	150/104	—	2	2		
Mrs. D. K.	35	W	P IX G X	180/104	0	1			1
Miss V. J.	25		P II G III	184/103	0	1	1		
Mrs. C. J.	36	W	P VII G VIII	168/110	50 mg.	1		1	
Mrs. J. L.	17	W	P 0 A I G III	142/118	30 mg.	1		1	1
Mrs. P. L.	23	W	P II G III	150/110	10 mg.	1			
Mrs. C. McG.	22	W	P 0 G I	158/98	50 mg.	2	1	1	
Mrs. J. Y.	42	W	P V G VI	168/88	60 mg.	1	1		
Mrs. F. C.	21	W	P 0 G I	140/110	to 2500	17	8	6	3
Mrs. A. C.	39	W	P X A IV G XV	170/95	60 to 100	1	1		
Miss B. C.	19	W	P 0 G I	140/80	10 mg.	1	1		
Mrs. C. C.	16	W	P 0 G I	160/120	10 mg.	5	5		
Mrs. A. E.	24	W	P III G IV	150/110	50 mg.	1	1		
Mrs. S. G.	39	W	P VI G VII	180/100	0	1	1		
Mrs. E. M.	20	W	P 0 G I	185/110	0	8	8		
Miss D. E.	18	W	P 0 G I	150/120	0	7	5	1	1
Mrs. C. O.	26	W	P III G IV	160/112	50 mg.	2	1	1	
Mrs. D. H.	35	W	P IV A I G VI	180/120	0	2	I		I
Mrs. M. G.	40	W	P VI A I G VIII	174/104	45	3	II		I
Mrs. C. H.	21	W	P 0 G I	140/100	40	2	II		
Mrs. J. H.	18	C	P 0 G I	152/100	0	2	II		
Mrs. D. L.	42	W	P VII A I G IX	206/112		2	II		
Mrs. R. M.	19	W	P 0 G I	180/120	0	1	I		
Mrs. G. J.	25	W	P III A I G V	172/105		1	I		
Mrs. J. H.	20	W	P 0 G I	140/100	0	5	I	II	II
						117	75	27	15

severe preeclamptics who progressed to eclampsia following therapy with cryptenamine.

In conclusion, we feel that cryptenamine offers a powerful drug in the treatment of toxemia of pregnancy. We feel that by releasing the vasospasm, it gains time for deciding on the mode of delivery. Since we do not understand the cause of the vasospasm, a drug that apparently controls it as well as this does, is invaluable in circumventing severe progression of a potentially very severe condition. Since it is powerful in its action, the patient must be constantly observed. In no instance did such a severe decline in blood pressure occur that oxygen transfer to the infant led to a seriously ill newborn.

We feel that the blood pressure can be controlled in the majority of hypertensive crises and that the degree of drop depends on the dose, and frequency given. Cryptenamine given by the intramuscular route provides adequate control of the very severe cases of preeclampsia without the danger of precipitous drops possible by the intravenous use, alone, or in conjunction with apresoline.

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Wyeth's New Cardiac Films

Three new film concerning cardiac diseases are now available to medical groups, through the Wyeth Laboratories' Film Library.

The three films are entitled, "Disorders of the Heart Beat", "The Hepato-Jugular Reflux", and "The Heart Crippler".

"Disorders of the Heart Beat", produced by the American Heart Association under a grant from Wyeth, is a basic teaching film. The differential diagnosis of certain abnormal heart beat rhythms and the mechanism of the normal heart action are discussed.

A simplified explanation of the significance of the hepato-jugular reflux in the diagnosis and treatment of congestive heart failure is given in "The Hepato-Jugular Reflux". The film is presented by the University of Michigan, Wyeth Laboratories, and the Michigan Heart Association, under the direction of Dr. J. Marion Bryant, of New York University Post Graduate Medical School.

The third film, "The Heart Crippler", presents cases histories of several children suffering from rheumatic fever. The complete course of the disease is discussed.

This film was produced by the University of Kansas, in cooperation with the Children's Convalescence Center for Rheumatic Fever, the Kansas City-West Central Missouri Heart Association, and Wyeth Laboratories.

All three films are 16 mm. sound productions.

Modification (Pharmacogenic?) of Subphrenic Abscess

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GREAT ADVANCES in therapeusis often leave a new set of diseases or a modification of old diseases in their wake. Nowhere has this been better shown than in the "antibiotic era". We have recently had several experiences of clinical and radiologic evidences of disease in the right upper quadrant of the abdomen that did not run true to form, and which we believe merit recording.

There is no need to discuss at length the radiologic criteria for the diagnosis of typical subphrenic abscess since these are well known[3]. Briefly, the diaphragm is more or less elevated without or with a pocket of gas beneath it, its respiratory excursions absent or extremely limited, and its normal convexity flattened; there is a wide variety of associated thoracic findings, those in the pleura ranging from a small amount of clear serous sympathetic fluid to a massive empyema, and those in the lung ranging from simple compression and discoid atelectasis to pneumonitis without or with a putrefactive component and perforation into the bronchial tree.

Similarly, the clinical picture needs no expounding[1]. The patient, young or old, presents a primary condition in the abdomen or pelvis, usually inflammatory or ulcerative disease of the appendix, biliary tract, stomach, duodenum, spleen or pancreas, and is commonly in the post-operative state. Convalescence does not proceed normally, and evidences of sepsis supervene, such as anorexia, fever, chills, sweating, and local or referred pain. There may be tenderness superficial to the involved subphrenic spaces, a sense of fullness or even a mass, and edema of the skin. Such a clinical picture in conjunction with the typical radiologic findings makes the diagnosis.

Writings on this subject are practically unanimous (and rightly so) in their endorsement of the radiologic method as an invaluable aid in arriving at the diagnosis. Much more scarce, however, are discussions of its shortcomings. Dunphy and Botsford[2] in their excellent recent book state that frequently the radiologic examination is indecisive, and that "carefully repeated daily examinations of the suspected areas are necessary to corroborate the diagnosis". Similarly, not always are the clinical findings as well defined as we should like: its naturally insidious onset and course may be even more so under modern treatment; fever may even be absent, and anorexia the only symptom. In essence, the disease must be considered in all those patients with an abdominal or pelvic infection whose convalescence is not proceeding normally.

It is our thesis that more and more atypical (radiologically and clinically) varieties of subphrenic inflammation are to be expected because of the early, prolonged and widespread use of the antibiotics and chemotherapeutic agents. Modifications in the clinical and radiologic aspects of infections have been thus induced elsewhere, such as in the bones, lungs, and mastoids, and there is no reason to believe that infections beneath the diaphragm would be immune from such change.

CASE 1. W. W., 59 yr. old white male. The patient had been complaining of stomach trouble for the past year. The present illness began suddenly about 6 days before admission, with severe epigastric and lower chest pain, dyspnea and profuse perspiration. The significant physical findings at that time were moderate tachycardia, poor color, rigid and tender abdomen. He refused hospitalization. He improved remarkably overnight, and was given 600,000 units of penicillin the following day. He resisted hospitalization for the next five days. When finally admitted, he was described as appearing moderately ill, temperature 100.8 degrees, pulse 90, respirations 18. There was some dullness over the base of the right lung posteriorly, and the abdomen was distended, soft, and diffusely tender. The admission laboratory findings disclosed a white cell count of 15,900 with 79% segmented forms, and an infected urine. The clinical impression was acute urinary tract infection, and the patient was so treated. He received 100,000 units of penicillin every three hours and 500 mg. streptomycin every six hours intramuscularly. After two days this medication was replaced by Dicrysticin, 2 cc. twice daily.

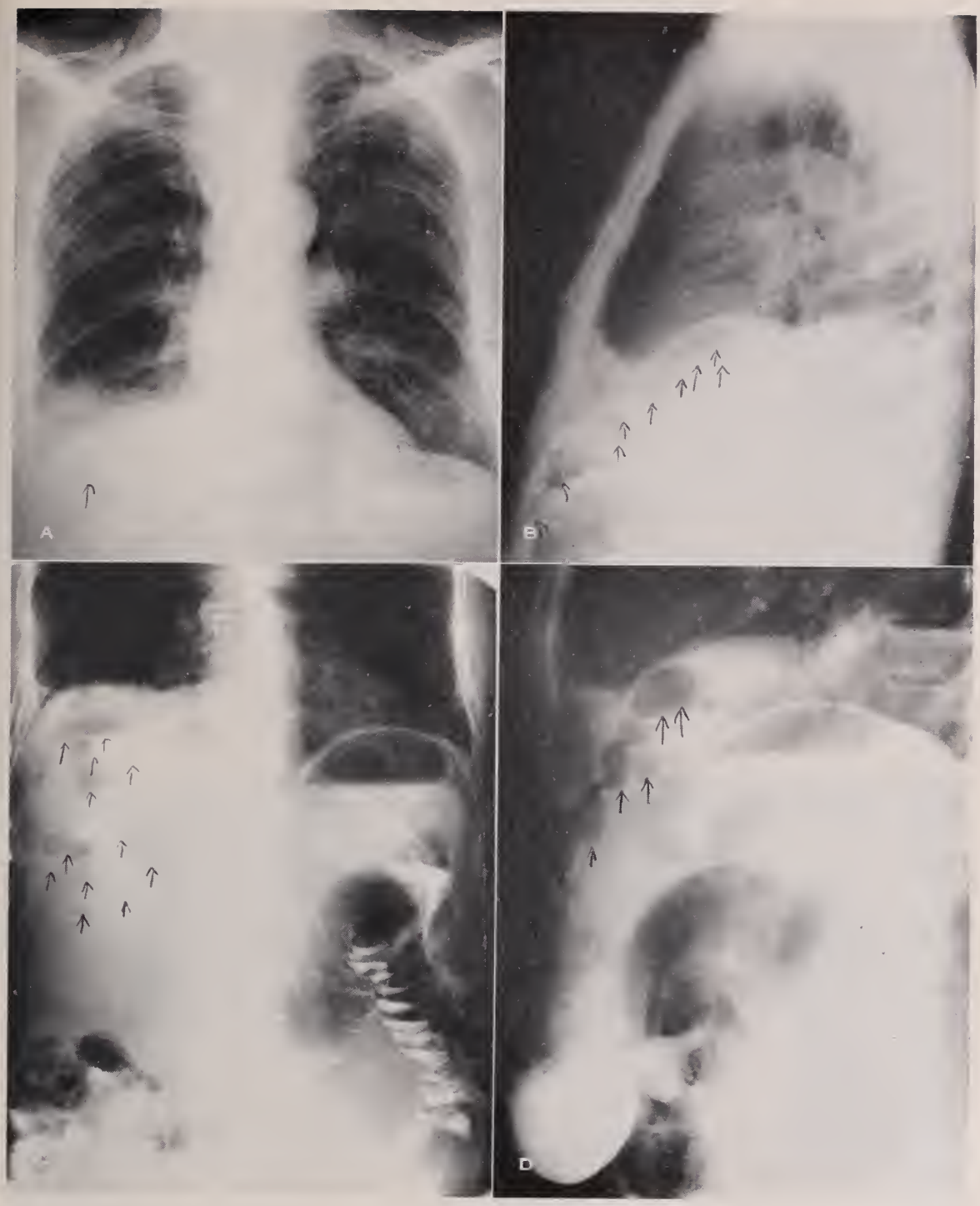


Figure 1, Case 1. W. W.

A. Posteroanterior chest, preoperative.

B. Lateral chest, preoperative. Note the free pleural fluid and the high, distorted hemidiaphragm on the right. The lateral view discloses multiple fluid levels anteriorly beneath the right hemidiaphragm.

C. Upright anteroposterior view of abdomen, preoperative. Note the multiple gas-fluid accumulations in the right upper quadrant.

D. Upright lateral view of abdomen. Note these same loculations anterior to the barium-containing stomach, beneath the right hemidiaphragm.

He was explored on the 9th hospital day after a remittent febrile course ranging between 99.0 and 101.6 degrees.

Preoperative radiologic studies disclosed a high right hemidiaphragm with impaired mobility, free pleural fluid on the right and many loculated gas-fluid accumulations anteriorly below the right hemidiaphragm. These remained constant over two days; this in addition to oral barium excluded the intestinal tract as being the cause for these gas-fluid pockets. A diagnosis of loculated pus with overlying gas, probably incident to unrecognized perforated peptic ulcer, was offered. (Fig. 1.).

Extraperitoneal exploration anteriorly was negative. Intraperitoneal examination deep to this disclosed some gelatino-fibrinoid material upon the dome of the liver. No frank pus was encountered. The space was drained. After three days the temperature returned to normal and the convalescence was uneventful.

Radiologic study of the gelatinoid material disclosed simply a mass of soft tissue density with no fluid levels within itself. Pathologic study of this material by Dr. George Thoma, Assistant Professor of Pathology, Medical College of Virginia, disclosed: "Grossly, a representative piece of evacuated material consists of a flattened 5 cm. discoid mass of white spongy friable matter without frank pus or fluid formation. Microscopically, sections reveal the tissue to consist of clumps of polymorphonuclear leukocytes and necrotic debris, all enmeshed in a network of fibrin. No specific inflammatory changes are seen and there is no attempt at granulation tissue formation. Diagnosis: Plastic inflammatory exudate".

A gastrointestinal study during convalescence disclosed deformity and irritability of the duodenal bulb, consistent with an active peptic ulcer. The gas-fluid levels were no longer seen. It was assumed that the original episode was a perforation of a duodenal ulcer, with localization of the inflammatory exudate beneath the right hemidiaphragm.

Case 2. A. F., 67 yr. old white female. One month before admission the patient had had a cholecystectomy for calculous gallbladder disease, with incomplete convalescence. Two days before admission she began to complain of pain in the right upper quadrant. Physical examination disclosed tenderness in the right upper quadrant with slight rigidity. The patient appeared acutely ill with a temperature of 102.8 degrees. The next four preoperative days, the fever ranged from 102.8 to 99.6 degrees, remittently. During these four days, the patients received 4.0 Gm. of Aureomycin intra-



Figure 2, Case 2. A. F.

A. Posteroanterior chest, preoperative. The right hemidiaphragm is elevated, and its mobility markedly reduced. The changes in the right base are interpreted as a pleural reaction with compression and discoid atelectasis.

B. Lateral chest, preoperative. The right hemidiaphragm is high and flattened posteriorly.

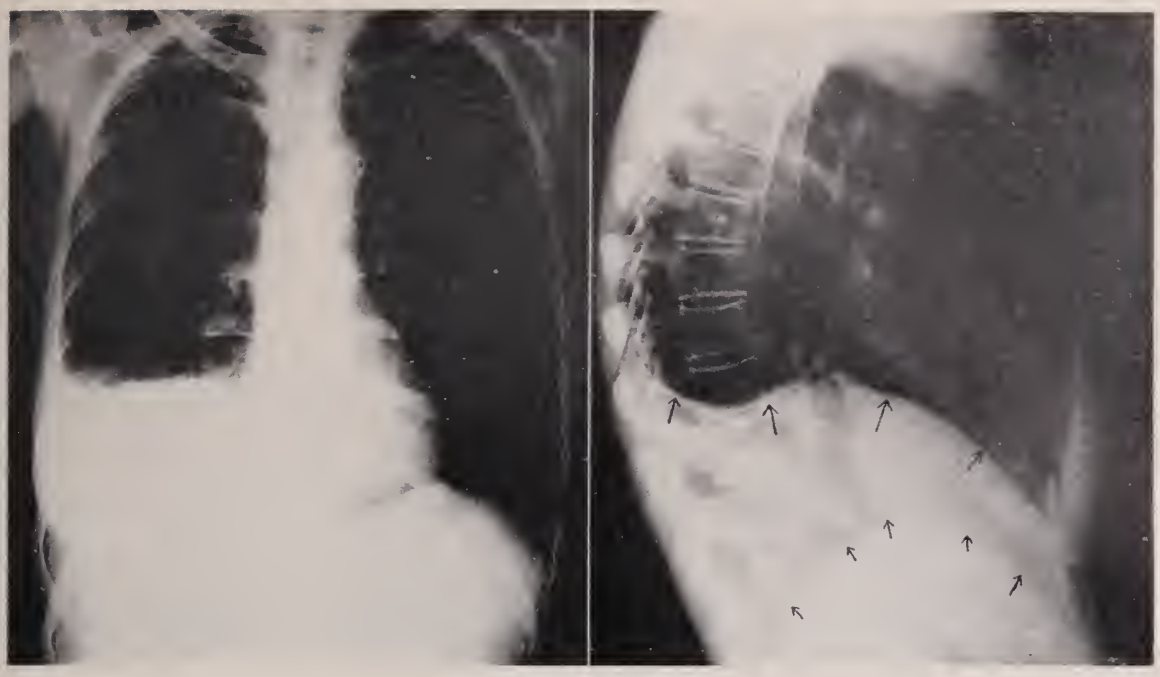


Figure 3, Case 3. M. G.

A. Posteroanterior chest, preoperative. High, relatively fixed hemidiaphragm on right, with typical crescentic shadow of free fluid in the right costophrenic sulcus.

B. Lateral chest, preoperative. Elevation of right hemidiaphragm is most marked posteriorly.

venously, and 4.0 Gm. of Terramycin orally. The patient's condition grew progressively worse so that her very survival seemed in doubt. Radiologic studies done under adverse conditions disclosed a high right hemidiaphragm, with mobility markedly reduced, and a pleural reaction in the right base (Fig. 2). Extraperitoneal exploration under local anesthesia of the right subdiaphragmatic region was negative. The temperature gradually returned to normal over the first four postoperative days. Complete recovery ensued.

Case 3. M. G., 59 yr. old white female. This patient had had two operations within a nine day period for mechanical obstruction of the small intestine caused by adhesions, probably initiated by a hysterectomy ten years before. The patient did well after the second of the two operations for obstruction, except for a wound infection. This was handled satisfactorily, but three weeks afterwards she began to run an intermittent spiking fever, ranging from subnormal in the morning to evening elevations of 103.2 degrees. With the onset of the fever, the administration of 1.0 Gm. of Terramycin intravenously daily was begun, and was continued for the six days before exploration of the subphrenic spaces. The patient at this time presented no significant abdominal findings, and indeed her only complaints were extreme weakness, sweating and general malaise. Radiologically, the patient presented an elevated, relatively fixed hemidiaphragm on the right side, with a pleural reaction above it. (Fig. 3.). Competent exploration of the right subphrenic region, including the subhepatic, failed to disclose any discernible abnormality. Inadvertent opening of the pleura showed nothing unusual in the base of the lung. The wound was drained. The patient withstood the procedure well, and the temperature slowly returned to normal over the first four or five postoperative days. Her convalescence was uneventful and complete.

All three of these patients presented a striking disproportion between the marked radiologic findings and the minimal operative findings. Only in the intraperitoneal exploration of W. W. were gelatinoid masses between the liver and peritoneum discovered. The negative exploration of A. F. was completely extraperitoneal, so the presence of intraperitoneal gelatinoid masses can not be excluded. The exploration of M. G. was principally extraperitoneal, but the subhepatic spaces were explored intraperitoneally. It is possible that gelatinoid masses betwen the liver and diaphragm were missed during the peritoneal phase of the exploration though the surgeons felt otherwise.

In none of the three patients was there any evidence that the radiologic findings were due to pri-

mary intrathoracic disease. Earlier (before the onset of the present illness) and subsequent radiologic studies of the chests of A. G. and M. G. were normal, thus excluding old thoracic disease as the cause of the abnormalities. None of the three patients presented any clinical evidence of active disease in the lungs, such as cough, sputum, localized chest pain, or hemoptysis. Finally, direct visualization of the lung in M. G. via an inadvertent rent in the pleura at the time of the exploration disclosed normal conditions.

We know of no way to differentiate the classic subphrenic abscess with its accumulation of pus from these *formes frustes* as positively illustrated by W. W. and probably by A. F. and M. G. It has been stated that the diagnosis of subphrenic abscess is not safe unless the hemidiaphragm of the involved side is *absolutely* fixed. All three of our patients presented marked reduction, but not absence, of motion of the hemidiaphragm. Future experience will determine the reliability of this as a differential guide. Care must be taken to exclude these other conditions accompanied by diminished, rather than absent, excursions of the elevated hemidiaphragm: primary active thoracic disease, such as pneumonitis, pleurisy, infarction; primary inactive thoracic disease, such as old pleuritic adhesions; disturbances of the phrenic nerve; the normal state following abdominal surgery; inflammatory disease in the abdomen and pelvis, such as cholecystitis, appendicitis, hepatitis, pancreatitis, etc.

It is difficult to assess the practical importance, if any, of these observations. It is impossible to say what the course of these three patients would have been without operation. It is entirely possible that the plastic exudate in W. W. could have been handled by natural means. His temperature course showed a slight downward tendency for several days before operation. The radiologic findings in all three of these patients were important factors leading to exploration. It is felt that both radiologist and surgeon should be put on his guard for a possible disparity between the radiologic and surgical findings, and in the event that the extraperitoneal approach is negative, intraperitoneal exploration is indicated. Further, all loculated gas-fluid accumulations beneath the diaphragm do not necessarily indicate loculated pus, but may mean simply plastic exudate as described in W. W., with edema fluid and gas from the perforated viscus (giving the fluid levels) held between the plastic-exudative clumps.

SUMMARY AND CONCLUSIONS

1. Attention of the radiologist and surgeon is directed to the fact that the radiologic complex of high hemidiaphragm with much reduced respiratory excursions, with pleural effusion, in the absence of primary intrathoracic disease, in a patient with the clinical setting of subphrenic abscess, does not always mean that a frank accumulation of pus will be found, but rather a modified form of suppuration. This may be overlooked in the classic extraperitoneal approach for subphrenic abscess.

2. It is suggested that antibiotic therapy plays a role in this radiologic-pathologic picture by interfering with the natural evolution from the early subphrenic phlegmon to the end stage of frank pus.

NOTE: We wish to thank Dr. Vincent W. Archer, Professor of Roentgenology, University of Virginia, for his kind help in preparing this paper.

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Disseminated Lupus Erythematosis Simulating Acute Rheumatic Fever

A Case Report

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LUPUS ERYTHEMATOSIS was described a century ago by Hebra, but was given its present name by Casenare. Later Kaposi, followed by Osler, pointed out the generalized nature of the disease[8]. In recent years outstanding advances have been made in diagnosing and treating this condition. The two most significant are: the demonstration of the Lupus Erythematosis phenomena[2,6,9] as a reliable method for diagnosing this disorder and the introduction of corticotrophin and corticosteroids for its treatment[1,3].

This disease belongs to the heterogenous group of collagen diseases which are sometimes referred to as the rheumatoid diseases. The disease process affects the capillaries and other small blood vessels of various organs of the body. It attacks the collagen fibrils and the ground substance of the connective tissue of the body. Clinically, one of the more common findings is a butterfly pattern across the bridge of the nose and malar eminences whence it gets its name, "Lupus".

The following is a case of Systemic Lupus Erythematosis which appeared more like acute Rheumatic Fever for several years but was finally diagnosed correctly by the finding of the Lupus Erythematosis cells.

CASE REPORT

This 20 year old white female was admitted 1-12-56 with the chief complaint of multiple painful and tender joints of two weeks duration.

For the past 4 to 5 years patient had had intermittent episodes of migratory hot, swollen and painful poly-arthritis. She was first investigated during an episode in May 1953, when she was found to have fever and an apical systolic murmur was heard. An EKG was done which showed A V conduction defect with changing pattern and tachycardia. A diagnosis of acute rheumatic fever was made, and she was treated with salicylates and Cortisone. The symptoms promptly subsided.

She was next seen when she was admitted to the hospital in May 1954 for vaginal bleeding. She was thought to be about 2½ months pregnant, and a diagnosis of incomplete abortion was made. A D & C was done. During the time she was pregnant she felt unusually well, although she took no medications.

Following this she began to have acute migratory joint pains again, lost weight, and ran a fever. She was again admitted to the hospital in July 1954 for further study. A sternal marrow preparation for Lupus Erythematosis cells was negative. Several blood cultures were negative; antistreptolysin titre —12 units; L.E.—clot test was negative; blood studies revealed 7,100 WBC, hemoglobin 10 gms., and normal differential. Routine agglutinations and a PPD test were negative. The urine was likewise normal. A diagnosis of acute Rheumatic Fever was again made. Following this she had several recurrent episodes.

In August 1956 she was readmitted to the hospital with vaginal bleeding and a history of pregnancy of about 2½ months duration. She had felt fine during this period. A diagnosis of incomplete abortion was made and a D & C was done.

She soon began to have acute poly-arthritis again and was treated with ASA and Meticorten with excellent relief. After a short period of this relief she stopped these medications, and her symptoms reappeared. Because of this she was readmitted to the hospital on September 12, 1956, for study. At this time she complained of hot, swollen and tender joints, weakness, anorexia, and feverishness.

Physical examination at this time revealed a blood pressure of 108/65, pulse 120, and fever of 101.8°F. She appeared acutely ill. The EENT examination was essentially normal. Her neck was normal in appearance, but there was some pain on motion. Examination of the chest revealed it to be normal. Her heart rate was 120/minute and regular. It appeared to be slightly enlarged to the left and a faint systolic murmur was heard at the apex. Abdominal examination revealed that the tip of the

spleen could be felt, but the abdomen was otherwise normal. There was pain, tenderness, swelling, redness in the ankles, knees, elbows, shoulders, wrists, and finger joints. The neurological examination was normal.

Laboratory studies revealed her to have a normal urine. The white blood cell count was 6,500 and hemoglobin was 10.4 gms. The sedimentation rate was 41 mm/hr. and hematocrit 30%. The differential revealed 88% polys., 2% eos., and 10% lymphocytes. Platelet count was normal. Wasserman was negative. Blood cultures were negative. Creative protein was negative. Two L.E. clot preparations were done and this time they were positive.

A chest x-ray was normal. An EKG revealed suggestive evidence of left ventricular hypertrophy.

While in the hospital she continued to run an elevated temperature and pulse. She was given aspirin without much benefit. Her arthritis improved very little. On her sixth hospital day she developed a pleural friction rub in the posterior left lung field area. Her blood counts remained essentially the same as on admission. After the L.E. preparations were reported positive, she was started on Meticorten 10 mg. Q.I.D. on the eighth hospital day. Within 24 hours her temperature had fallen from 101.8°F. to normal and her pulse from 96 to 80. There was a prompt remission of her symptoms also. She was discharged on the tenth hospital day on 20 mg. of Meticorten daily which was to be reduced gradually. At that time she was asymptomatic and feeling fine. She was discharged to the care of her family physician and she was apparently doing well three months later.

DISCUSSION

This case shows how Disseminated Lupus Erythematosis can mimic acute Rheumatic Fever. This can be very confusing and, as in this case, the diagnosis can require several attempts to demonstrate the L.E. cells over a period of years. The differential diagnosis not only includes Rheumatic Fever, but such diseases as acute Rheumatoid Arthritis and other types of acute arthritis, undulant fever, subacute bacterial endocarditis, etc. Of course the diagnosis can be easily made if the butterfly rash is present on the face, but often it is not.

The prognosis is now considered much better than it was formerly[1,11]. Although the patient may have an acute fulminating form of the disease and survive only a few months, a great many live on for years with periods of remissions and exacerbations.

Treatment in this case was with Meticorten and was quite dramatic. Although it has not been definitely proved, some workers believe that the corticosteroids probably prolong life.

This case also shows how the disease can interfere with the ability of the uterus to sustain a viable fetus as has been pointed out by Friedman and Rutherford[5]. Her only two pregnancies ended in spontaneous abortions at 2½ months. Whether the corticosteroids can alter the outcome is not known, but it might be interesting to try them on her next pregnancy.

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Perforation of the Esophagus

Produced by a Plastic Toy

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THE PROBLEM of management and diagnosis of foreign bodies in the food passages has long been of concern to the medical profession. The first systematic study of this subject was done by Gross[1] in 1854, and the keenness of his observations remains a monument to the practice of medicine. When a new means of detection of foreign bodies resulted from Chevalier Jackson's[2] invention of the esophagoscope great advances were made in the treatment and recognition of foreign bodies.

Ingestion of foreign bodies in the food and air passages is relatively common. Grekin[3] noted that twenty-five per cent of the patients involved were psychotic. Perforation caused by ingestion of foreign bodies is unusual, and until 1940 when a thorough review of the literature was done by Head[4] only seventy-two instances had been reported. A great variety of foreign bodies have been found in the esophagus among which may be listed coins, bones from various types of animals, bottle stoppers, bottle caps, fish hooks, dentures, living creatures such as worms or leeches, and toys. In 1953 a very thorough study of this subject was done by Hung[5]. Boyd[6] reported the histories of three patients who swallowed plastic toys. Damage to the esophagus resulting in stricture or deformity has been noted in previous cases[7]. Such deformity as well as cardio-spasm predisposes to the retention of foreign bodies at a particular site[8]. Foreign bodies more commonly lodge in the cervical part of the esophagus. The cervical esophagus usually has the best blood supply. Localization of a foreign body in this area affords a more favorable prognosis for the patient. In addition to injury of the esophagus from foreign bodies, large vessels may be injured, and uncontrollable hemorrhage may develop. Hemorrhages also occur as a result of large unpointed objects causing pressure necrosis. The management of patients who have foreign bodies in the esophagus is a disputed subject. Some authors advise immediate mediastinotomy[8], others conservative management. The question of complications resulting from foreign bodies depends largely upon the treatment given.

Some authors recommend immediate surgery to prevent the development of a mediastinal abscess. However, recent reports indicate that infection can be controlled by antibiotics and conservative management. It is possible to do an esophagostomy in many cases and remove the object if there is no old scarring or difficulty in reaching the foreign body[3]. One of the most useful diagnostic aids in detecting the presence of a foreign body in the esophagus is the history. In the case reported here a recent history was not obtainable since the patient was uncommunicative. Suspicion was aroused only by the patient's tendency to ingest objects known to us from his past history. Another problem which this case illustrates is the lack of value of the x-ray examination since the object was not radio-opaque[9].

CASE REPORT

A 58 year old white male schizophrenic was admitted to Eastern State Hospital on February 14, 1943. He did not respond to psychiatric treatment, but posed no problem in management until December, 1953 when the ward physician noted that the patient was losing weight. The patient ate his meals only with great difficulty. During evaluation of his medical condition a chest x-ray was taken. A foreign object was faintly outlined in the first chest film. Conservative management was deemed advisable and the patient was returned to his ward after this first examination but showed no improvement and did not pass the foreign body. On January 21, 1954, another x-ray was ordered. This time an upper G I series with a barium swallow was undertaken and films showed a foreign body, apparently of light metallic substance, round in shape, measuring 2 x 2 cm (figure 1), located at the level of the fifth thoracic vertebrae. Slightly below this level was an area of marked narrowing. Serial films of the stomach did not reveal any further pathology. On January 29, 1954, an esophagoscopy



Fig. 1

was performed which revealed a bottle cap lodged in the esophagus. This was removed and the patient recovered without sequelae.



Fig. 2

On February 15, 1954, another series of film were taken with barium to evaluate his condition. On this examination it was found that the patient had, since his return to the ward, swallowed another object. This appeared to be a belt buckle (figure 2). Also seen were several small buttons which had passed into the intestines and were not causing any difficulty. The belt buckle was located at the sixth thoracic level. There was a partial esophageal obstruction with dilatation above this area.

On February 20, 1954, an endoscopic examination was again performed and one belt buckle and one peach seed removed.



Fig. 3

On February 26, 1954, a third follow-up barium swallow was ordered. A suggestion of a round density 3 cm. in diameter was noted about the middorsal level of the esophagus (figure 3). There was an apparent stricture of the esophagus at the fourth dorsal level. No opaque foreign bodies were noted in the abdomen. The stomach was filled with barium and did not appear unusual. However, it was felt that this patient should again be explored to determine whether or not all the objects were cleared from the esophagus.

Endoscopy was performed for the third time on March 4, 1954, and two medium sized buttoms, portions of orange peel, and a small rubber ball were found (figure 3). More x-rays were made to see if other objects could be located. On March 17th, another barium swallow was performed and these

films showed that no further metallic objects were present in the esophagus or in the abdomen.

There were no other known instances of ingestion of foreign bodies until the fatal episode. On January 12, 1957, the patient developed acute hematemasis. Within thirty minutes he went into a state of shock; blood pressure could not be measured. Emergency treatment was instituted but the patient expired before adequate blood replacement or surgical intervention could be performed. Autopsy revealed a stricture of the middle third of the esophagus (figure 4). (This had been noted on pre-

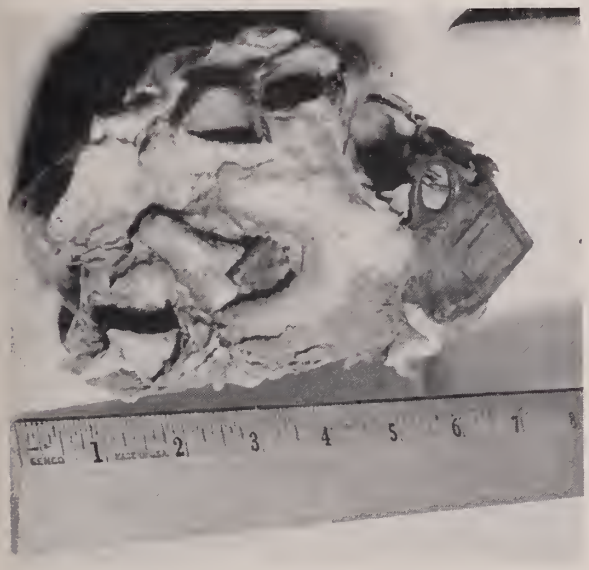


Fig. 4

vious x-ray studies.) A foreign body was lodged in the area of the obstruction. This proved to be the broken butt end of a small plastic pistol with a sharp area protruding through the posterior wall of the esophagus (figure 5). Gross hemorrhage was pres-



Fig. 5

ent in the mediastinal space with leakage into the abdominal cavity. Profuse hemorrhage was present in the stomach and the gastro-intestinal tract.

In a final evaluation of the case it was agreed by the physicians concerned that the mediastinal perforation must have been rapid. This opinion was supported by the autopsy findings which showed only minimal signs of mediastinitis and no evidence of a mediastinal abscess. Perhaps the only reason which can be given as to the ability of the patient to ingest such a large foreign body is that he was psychotic. Occasionally psychotic patients have been known to ingest large foreign bodies in order to commit suicide. The motivation in this case is doubtful, and it can only be inferred that, due to the deteriorated state of the patient, his motivation probably rested upon some obscure delusional ideation rather than any well defined goal of this sort. The repetitive nature of his act, as demonstrated by the history, would support this thesis.

As shown by the fatal outcome of our case it need hardly be emphasized that preventive measures are superior to any treatment in this type of case. Close supervision by ward attendants to prevent objects which might cause trouble if ingested from falling into the hands of such patient has obvious value. While radiologic examination is helpful if the foreign body is radio-opaque, many objects which can cause difficulty fail to show on an x-ray and this was the case in the present instance. Treatment, ideally, should be prompt and planned according to the dictates of the individual problems presented by the case.

SUMMARY

The literature concerning foreign bodies in the esophagus is briefly reviewed and a case described. Mention is made of the high incidence of ingestion of foreign bodies in psychotic patients and also of the value of careful history taking as an aid to diagnosis. The necessity for treatment of such cases on an emergency basis is illustrated. Preventive measures are outlined.

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Flavonoids in Disease Treatment

As matters now stand, flavonoids are of "little or no value" in the treatment of disease and have no known nutritional uses, according to a report by two American Medical Association councils.

William N. Pearson, Ph.D., of the department of biochemistry of Vanderbilt University School of Medicine, Nashville, Tenn., wrote the report for the A.M.A. Councils on Foods and Nutrition and Drugs.

The report in the August 10th A.M.A. Journal was prompted by "the recent upsurge of interest" in flavonoids, particularly in the treatment of numerous diseases including the common cold.

Flavonoids are carbon-hydrogen-oxygen compounds that are widely distributed in nature as pigments in flowers, fruits, tree barks and vegetables. Their most important commercial source is citrus rind. Considerable interest in the possible nutritional significance of these compounds was aroused in the late 1930s by Dr. A. Szent-Gyorgyi and coworkers who isolated "citrin" from citrus fruit peels and reported it to be effective in strengthening capillary and blood vessel walls against breakage, Pearson said. Such breakage of capillary walls is supposed to occur in a number of diseases.

However, valid tests for measuring the effect of flavonoids on capillary walls have not been devised. An earlier belief that they were a type of vitamin has not been confirmed.

Reports on several small studies were enthusiastic about the flavonoids' influence on common respiratory infections, because of their supposed capacity to strengthen capillary walls, but larger studies did not confirm these findings.

"On the basis of the best evidence now at hand, it would appear that flavonoids have no significant effect . . . on the course of the common cold."

While they do appear to have some effect on capillary wall strength and do possess some mild blood-vessel-constricting effects, these properties are "rather weak when compared to those of other available agents."

Their effects on other diseases, including hypertension, diabetes, rheumatic fever, arthritis and various blood diseases, have been studied, but it is not possible to reach a valid conclusion as to their effectiveness because of the "general unreliability" of the testing procedures and the fact that periods of improvement occur spontaneously in these conditions.

In conclusion, Pearson said: "The high hopes once held for the flavonoids . . . have not materialized. Instead, present knowledge indicates that, while they possess mild pharmacological properties under certain conditions, the flavonoids have no known nutritional functions. They cannot be regarded as essential nutrients. Those workers who claim therapeutic value for the flavonoids have not supported their claims with data obtained from well-controlled clinical studies.

"Until such studies are made, it must be concluded that the flavonoids are of little or no value in the treatment of disease."

The Arylsulfonylurea Drugs Which Produce Hypoglycemia

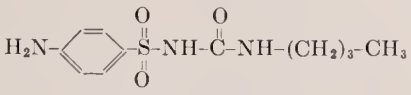
Their Use in the Treatment of Diabetes Mellitus

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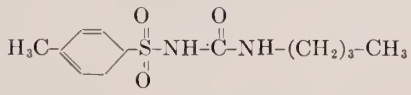
SINCE THE DISCOVERY of insulin, patients requiring this drug and their physicians have hoped for a safe, effective and inexpensive treatment for diabetes mellitus which would not require daily injections. There have been many attempts to protect insulin, a hormonal protein, from the destructive action of digestive juices and thus permit its use by mouth, but from a practical point of view these have been unsuccessful. Over the years a variety of nostrums have appeared claiming effectiveness in relieving diabetes mellitus when taken by mouth, but, to our knowledge, none of these has had any real value. An abundance of recent work has shown, however, that such an effective oral treatment may soon be at hand, for some diabetic patients at least, in the form of the arylsulfonylureas. These synthetic compounds, related to the sulfonamide antibacterial drugs, have been shown experimentally and clinically to lower blood sugar levels in normal subjects and in some diabetic subjects. There is general agreement among all investigators with the initial work of Loubatieres[1] that these compounds are effective orally and parenterally, and that the hypoglycemia induced by them is proportional to the dose, up to a limit beyond which increased dosage lowers the blood sugar no further.

Of the arylsulfonylureas which produce a hypoglycemic effect, two appear the most promising and have been given the most extensive investigation. These are 1-butyl-3-sulfanilylurea (carbutamide, BZ-55*) and 1-butyl-3-p-tolysulfonylurea (tolbutamide, Orinase R†). The structural formulae of these compounds are shown in Figure 1.

The purpose of this paper is to review briefly some of the recent literature concerning these compounds with regard to their mode of action, possible side effects, and their clinical use.



1-butyl-3-sulfanilylurea
(carbutamide)



1-butyl-3-p-tolylsulfonylurea
(tolbutamide)

Fig. 1

MODE OF ACTION

Numerous experiments have been done in an effort to throw light on the action of these drugs. Several hypothetical mechanisms have been mentioned, based on various phases of insulin and carbohydrate activity which might be affected by drug action. The results of these studies and the conclusions of the several workers in this field are at present controversial. No clear cut mechanism of the action or actions of the arylsulfonylureas has yet been demonstrated. The following is an outline of mechanisms which have been considered.

Insulin-like action. Fritz *et al*[2] and others[3] have shown that the arylsulfonylureas do not act like insulin or synergistically with insulin, by the finding that they do not promote glucose uptake by muscle in the eviscerated animal. In Fritz's preparation they do not enhance the effect of exogenous insulin. Renold *et al*[4] have shown that, unlike insulin, the arylsulfonylureas do not have any effect in decreasing the blood sugar raised by a glucose load.

Stimulation of beta cells. This is one of the more likely modes of action of the arylsulfonylureas. Evidence in support of this mechanism is provided

Submitted by Dr. Kinzer while a senior medical student at the Medical College of Virginia, as term paper required for graduation. Dr. Kinzer's present address is Akron General Hospital, Akron, Ohio.

*BZ-55 is the Eli Lilly and Company preparation of 1-butyl-3-sulfanilylurea (carbutamide).

†Orinase is the Upjohn Company preparation of 1-butyl-3-p-tolylsulfonylurea (tolbutamide).

by Lang and Sherry[5] who demonstrated that the drugs have no effect in the completely alloxanized animal (in which the beta cells of the pancreatic islets have been selectively destroyed), and in the completely pancreatectomized animal. Volk[6] and others have demonstrated beta cell degranulation in rats and other animals given these drugs, and it is felt this may represent enhanced insulin secretion. The Colwells[7], in their classical experiment, have perfused carbutamide and tolbutamide into the pancreatic artery of dogs and found that marked hypoglycemia was produced by amounts smaller than would cause a measurable hypoglycemic response when injected into other peripheral vessels. They concluded that the drugs' action is in great part or totally localized to the pancreas. Renold[8] cites cross circulation experiments in which the pancreatic venous blood after carbutamide administration contained increased amounts of a hypoglycemia producing substance which was not carbutamide. Ashworth and Haist[9] have shown that in rats, carbutamide fed orally for three to five weeks causes an increase in the weight of pancreatic islet cell tissue.

Inhibition of insulin-destroying agents. Mirsky *et al*[10] suggest that non-competitive inhibition of insulinase has a role in the response to the arylsulfonylureas. Among their data in support of this possibility is the reduction in the insulin requirement of the depancreatized dog when tolbutamide is given. Also, the hypoglycemia produced in non-diabetic subjects given these drugs is more prolonged than that produced by intravenous injection of insulin.

Williams and Tucker[11], however, offer experimental evidence that the concentrations of carbutamide necessary to produce hypoglycemia in rats are much less than those required in vitro to inhibit insulin degradation by a liver enzyme preparation. Degradation was measured by the hypoglycemic response in mice and by the accumulation of trichloracetic acid-soluble radioactive substances liberated from insulin tagged with I^{131}. Their conclusion was that since other biochemical reactions concerned with carbohydrate metabolism are affected by lower concentrations of the arylsulfonylureas, mechanisms of action other than inhibition of insulin degradation may account for the benefits from this type of therapy for diabetes. Fajans *et al*[12] report the drugs produce no change in sensitivity to exogenous insulin.

Suppression of adrenal and pituitary glands or their secretions. This possibility as a mode of action seems unlikely in view of the fact that adrenalectomized and hypophysectomized animals become severely hypoglycemic when treated with the arylsulfonylureas[5,13]. Renold *et al*[4] have drawn similar conclusions from work involving adrenal cortical function in patients before and after hypophysectomy. Fajans *et al*[12] in their extensive study of these drugs noted no alteration of endocrine function in the endocrinologically intact patient, stating that there is no change in glucose tolerance tests, persistence of epinephrine induced hyperglycemia, no change in urinary excretion of 17-hydroxycorticoids and 17-ketosteroids, no change of nitrogen and electrolyte balance, no effect on prednisolone induced loss of carbohydrate tolerance, and no alteration of metabolic effects produced by prednisolone. Fajans also notes that the urinary metabolite of carbutamide exerts no hypoglycemic action.

Inhibition of glucagon secretion (depression of alpha cells).* This mechanism is unlikely since the drugs are not effective in the alloxan diabetic animal (in which the alpha cells are left intact). Volk *et al*[14] have studied the effects of these drugs in the rabbit and in diabetic and non-diabetic patients. They found no morphological alteration of the alpha cells. Inhibition of glucagon action in the liver also seems unlikely, in that several workers demonstrate that these drugs produce no depression of glucagon-induced hyperglycemia[12,15,16].

Inhibition of hepatic gluconeogenesis. Wick *et al*[17] have demonstrated that there is no direct effect by the arylsulfonylureas on extrahepatic tissues by showing that after injection, the drug circulates only in the extracellular compartment, does not accelerate the intracellular transfer of plasma glucose either in the presence or absence of insulin, and that the oxidation of C^{14} labelled glucose is not accelerated. Renold[4] and Miller and Craig[16] find decreased conversion of galactose and fructose to glucose during arylsulfonylurea administration. The latter state, "We cannot escape the conclusion that Orinase (tolbutamide) must be concerned with gluconeogenesis." Berthet *et al*[15] confirmed these findings in their experiments, but found that concentrations of the arylsulfonylureas necessary for the in vitro effect were inordinately greater than the plasma levels

*Glucagon is a protein apparently elaborated by the alpha dells of the islets of Langerhans, and possibly other sites in the body. This hormone when given parenterally induces hyperglycemia by breaking down liver glycogen. It has been found as a contaminant of commercial insulin and probably accounts for some of the variability of the hypoglycemic action per unit weight of pancreatic extracts used in the preparation of commercial insulin. Some insulins are now being produced which are glucagon-free. (Wrenshall, Canad. M. A. J. 74:871, June, 1956.)

necessary for similar in vivo effects. Both Berthet and Ashmore[18] feel that the action of these drugs is not mediated through inhibition of glucose-6-phosphatase, on the basis of their animal experiments, inasmuch as the quantities of the drugs required for the in vitro effect are much greater than would be physiologically significant. Ashmore postulates that the reduction of glucose-6-phosphatase activity observed after feeding tolbutamide over a forty-eight hour period could be due to a direct effect of the drug on the synthesis of the enzyme, or could be an indirect effect through either the release of or the potentiation of endogenous insulin. Moorhouse and Kark[19] note that in tolbutamide-induced hypoglycemia there is no effect on blood levels of pyruvic and lactic acids, and that there is no effect on blood levels of glucose during glucose absorption. They interpret these data as suggesting inhibition of glucose formation in the liver, and further this hypothesis with experiments with fructose, adrenalin and glucagon, seemingly localizing the action of the arylsulfonylureas in the glycolytic cycle at or below the level of glucose-6-phosphate. Friedlich *et al*[20] have demonstrated that in rats treated with carbutamide, the rate of intestinal absorption of glucose is slowed. In light of knowledge that for glucose to be absorbed from the intestine it must be phosphorylated and then dephosphorylated, it appears possible that one of the modes of action of these drugs is by inhibition of glucose-6-phosphatase.

It is seen from this discussion that the mechanisms of action of the arylsulfonylureas need further elucidation. Nevertheless, it must be regarded as established that there is a pancreatic action of these drugs, on the basis of cross circulation experiments and pancreatic artery perfusion experiments. Whether the portion of hypoglycemia due to the drug effect on the pancreas is more or less marked than that on the liver must await results of experiments on hepatectomized animals with intact pancreas and pancreatic blood supply. It may even be found that the supposed hepatic actions are the result of increased insulin elaboration.

POSSIBLE SIDE EFFECTS

With the beneficial action of any drug, the possibility of concommitant deleterious effects must be considered. This matter is especially important in connection with drugs proposed for use in patients previously treated by methods as free of side effects as insulin.

Of over 7000 patients reported who were treated with carbutamide[21], a total incidence of 5.4% side effects is noted. Among these are eight deaths in which the drug might be implicated, and ten deaths attributable to other causes. The more frequent and the more serious side effects associated with carbutamide were dermatitis, gastrointestinal distress, malaise, granulocytopoenia, general allergy, cardiorenal complications, anemia and impaired liver function.

Of over 5000 case summaries of patients receiving tolbutamide[22], the total incidence of side effects is 3.1%. The side effects of this drug were less serious on the whole, and only one death may have been attributable to it. Though thirty-four other deaths occurred in patients taking tolbutamide, the drug was not implicated in their causation. To be noted in connection with tolbutamide was a much lower incidence of granulocytopoenia, as well as lack of renal and hepatic damage, and of clinical hypothyroidism.

Feeling that these drugs may act by stimulation of beta cells, Fritz *et al*[2] warn that their long-term use may cause degenerative changes in the beta cells, but add there is no evidence to suggest this possibility. Volk[6] has shown beta cell degranulation progressing to completion in eight days in rats, but in his experience, the change is reversible on discontinuance of the arylsulfonylurea.

Since these drugs are members of the sulfonamide family, questions have naturally arisen concerning their solubility, especially in urine. Forist and Chulski[23] have plotted solubility curves of tolbutamide and its excreted metabolite, and compared them with the solubility of sulfasuxazole. Within the pH range of normal urine, they found these substances to be more soluble than the so-called "soluble sulfas" now in common clinical use.

Brown and Solomon[24] and others[12,25] have noted that these drugs reduce radioactive iodine uptake and after several weeks, plasma protein-bound iodine. They also note a tendency toward a decreased basal metabolic rate. However, there has been no clinical hypothyroidism associated with use of these drugs. The method by which the arylsulfonylureas produce this effect is not known as yet.

In long-term treatment regimens the possibility of hepatotoxicity must not be overlooked. Marble[26] has noted abnormal liver function tests in association with both carbutamide and tolbutamide; however, his studies indicate that with continued tolbutamide therapy these values return to normal levels. Unfortunately, this has not been the experience with carbutamide—at least within the time limits of present clinical use. For this reason, and for others

given above, extensive clinical trials with carbutamide have been temporarily curtailed.

These experiences underscore the need for further extensive investigation of the arylsulfonylureas before they can be made available to the medical profession for large scale treatment of diabetes mellitus.

CLINICAL USE

In applying the arylsulfonylureas to the treatment of clinical diabetes mellitus, most workers are in agreement as to certain facts. It is known that these drugs are effective as an insulin substitute only in the stable non-ketone-forming diabetic (variously called: adult onset diabetic, obese diabetic, stable middle-aged diabetic). They are without effect in the ketone-forming diabetic (variously called: juvenile diabetic, lipoatrophic diabetic, labile diabetic, thin diabetic) characterized pathologically by absence of pancreatic islet beta cells. Moorhouse and Kark[19] feel that the difference in response between the ketone-forming and the non-ketone-forming diabetics is evidence in support of the view that these two types of patients are suffering from different metabolic diseases. Where the drugs are effective they can be substituted for twenty to forty units of insulin daily. This is achieved by a maintenance dose of one to three grams of either carbutamide or tolbutamide daily. As has been previously stated, greater dosage does not increase the effect of the drugs.

Miller and Craig[16] have studied several isolated forms of diabetes for the effectiveness of the drugs in lowering the blood sugar. They find that tolbutamide is effective in maintaining a lowered fasting blood sugar level in the surgical diabetic with as little as 20% of the pancreas remaining intact. They also report that they were able to substitute the arylsulfonylureas for 500 units of insulin daily in an eighteen year-old negress who required 2000 units of insulin daily for control of her lipoatrophic form of the disease. They note that the drugs have no effect in hemochromatosis with diabetes.

Miller and Craig and Braverman *et al*[27] and others note that even in the stable adult type diabetic, the drugs are not effective in reducing blood sugar in acute complications such as infection.

Much has been written concerning the clinical selection of diabetic patients to be treated with the arylsulfonylureas[10,27,28,29]. In general, it may be said that the patient most likely to be responsive to such treatment is one who is forty years or older, whose disease has been evident less than ten years, and who requires less than forty units of insulin daily for good control. These criteria for selection, however, exclude many a diabetic whose disease is subject to arylsulfonylurea management, as emphasized by Dolger[30]. He states that any diabetic whose disease begins after the age of fifteen years should receive the benefit of a therapeutic trial. Many such trials have been proposed—mostly based on the response to a test dose of the drug—but so far, none has been adequate to select all of the responsive candidates and reject all of the non-responsive ones. An interesting proposal in this regard is that of Anderson *et al*[3], who noted that the best responders were diabetics who before treatment with tolbutamide were relatively insensitive to the action of glucagon.

In introducing an office patient to the arylsulfonylureas for purposes of treatment, the method recommended by Dolger[31] would seem reasonable. First, the drug and its effects and purposes should be explained in a way that the patient understands. Second, during the change from insulin to the arylsulfonylurea no other diabetic circumstance should be altered (*e. g.*, diet). Third, three grams daily of the drug in two divided doses is prescribed and the insulin dose is reduced by 1/3 every other day. The patient should report daily by telephone to his physician, and at that time should be questioned concerning glycosuria and hypoglycemic and ketotic symptoms, as well as any signs of untoward drug effects. If the transition seems to be proceeding well, then it should be continued and the patient seen at the end of the first week, by which time he should be off insulin entirely. The dose should then be adjusted to the lowest level which maintains satisfactory diabetic control. If the diabetes is not controlled during the transition, the patient should revert to his former dose of insulin and the drug should be discontinued. During the early months of treatment, the patient should have frequent white blood cell counts and be carefully observed for untoward effects as mentioned in the preceding section. Use of these drugs in diabetics who cannot be carefully observed at frequent intervals during the first few months of therapy is contraindicated. During acute complications of diabetes, blood sugar should be controlled with insulin.

The physician should beware of interpreting a good response in the obese patient as an effect of the arylsulfonylureas. Marble[26] has noted that under experimental clinical conditions in which these drugs were tried, fairly good adherence to diet was maintained. In substituting a placebo in these patients,

he observed that one-third did as well on the placebo as they had done on the actual drug. The remaining two-thirds, however, required the arylsulfonylurea for control.

It is to be emphasized that these drugs have enjoyed only limited use in the treatment of diabetes mellitus, and at this time it is not possible to know the magnitude of their effect in the human body. Until there have been many large and carefully controlled studies completed in diabetes clinics, use of the arylsulfonylureas by the practitioner on his diabetic patients should be withheld. Of special concern is the possibility that the public at large may think of the arylsulfonylureas as a complete substitute for insulin in diabetic therapy. The responsibility for prevention of this misconception lies in the hands of every physician who initiates treatment with these drugs. He must conscientiously explain to the patient the drugs' use in relation to the disease, make him aware that the disease is not cured, and warn him that the possibility of complications of the disease is not eliminated, nor is the possibility that with progression of the disease he may have to resume treatment with insulin.

SUMMARY

1. The arylsulfonylureas (carbutamide and tolbutamide) are synthetic drugs related to the sulfonamides. They produce hypoglycemia in normal and certain diabetic subjects. They have recently become of widespread interest for their possibilities in the treatment of diabetes mellitus.

2. The literature concerning these drugs has been reviewed from the standpoints of mechanism of action, possible side effects, and clinical use.

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Relieves Involuntary Movements

A brain operation which has helped adults suffering from Parkinson's disease has now been used to help cerebral palsied children. The procedure, called chemopallidectomy, relieves the muscular rigidity and tremor of Parkinsonism and the involuntary movements of cerebral palsy without impairing the ability to move, according to Dr. Irving S. Cooper, director of the department of neurologic surgery, St. Barnabas Hospital, and professor of clinical neurosurgery, New York University-Bellevue Medical Center, New York.

The operation has been used on 30 children suffering from hyperkinetic or involuntary movement disorders with beneficial results in 20, Dr. Cooper said in the July 20th Journal of the American Medical Association.

His procedure involves injecting chemicals into the region of the globus pallidus, which lies in front of the thalamus. Why the operation helps relieve tremor, rigidity and involuntary movements is not exactly understood and requires much more study.

Most of the children's disorders were of congenital origin. They included chorea, or St. Vitus' dance; hemiballismus, a violent form of motor restlessness involving one half of the body; athetosis, a constant recurring series of slow movements of the hands and feet; dystonia, and abnormality of muscular tension; and fixed postures.

In 20 of the children, followed for 3 to 24 months, there was "abolition or marked alleviation" of the involuntary movement disorder. One patient died and nine others were not benefited. He noted that a higher incidence of success is currently being achieved.

Dr. Cooper pointed out that chemopallidectomy is aimed only at relief of the involuntary movement disorders and will not relieve other abnormalities, such as paralysis, that are so frequently connected with congenital brain lesions. In cases in which the involuntary movements occurred in otherwise normal limbs, it was possible to relieve "even the most violent movement" while preserving normal movements in the limbs.

Current Currents

THE PRELIMINARY PROGRAM of the the 1957 Annual Meeting is published in this issue and members are urged to study it carefully. The Program, featuring twelve guest speakers, is one of the finest ever arranged for an annual meeting.

AN IMPORTANT QUESTIONNAIRE may be found on page 5 in the advertising section of this issue, and your editors hope that you will complete and return it at your earliest convenience. Such readership surveys are vitally important if the Monthly is to continue to improve and serve you better. Then, too, these surveys are requested by advertisers and advertising agencies, who need certain basic facts when planning their state and national programs. The questionnaire will require but a few seconds of your time.

SAN FRANCISCO will be the scene of the 1957 Annual Meeting of the American Association of Medical Assistants. The meeting will be held in the Sheraton-Palace Hotel from October 4-6. Medical assistants wishing to attend should contact Mrs. Mabel Dove, 1100 Church Street, Lynchburg, for registration blanks.

THE BOARD OF TRUSTEES of the American Medical Association has voted to cooperate with the United States Public Health Service in providing the public with information as to the need of vaccination against Asiatic influenza, provided the vaccine is safe and effective and there is a need for widespread immunization.

Following the action of the Board, a group of Trustees met with the Secretary of Health, Education and Welfare and the Surgeon General of the U. S. Public Health Service and approved the following statement for publication:

> "The Public Health Service, in cooperation with the medical profession, will stimulate and promote a nationwide voluntary program of vaccination against the prevalent strain of influenza. It will not, however, request Federal funds for the purchase or administration of vaccine—except for its own legal beneficiaries. The state and territorial health officers and the American Medical Association have jointly assured the Surgeon General that community resources, both public and private, will be mobilized to provide vaccinations for persons who are unable to pay for such protection."

THE AMERICAN MEDICAL EDUCATION FOUNDATION has announced plans to launch an intensive fall campaign for contributions to the nation's medical schools. The Virginia AMEF Committee urges all members to contribute now and help win the battle to keep our medical schools free.

THE AFL-CIO apparently will take a firm stand against the actions of medical societies which fail to go along with union labor medical programs. A newsletter recently issued by the Association of Labor Health Administrators reports that the AFL-CIO Committee on Social Security has agreed on such a stand.

The publication calls for action in opposing the "attack and harassment of component medical societies against union plans, particularly in the states of Pennsylvania, Illinois and Colorado." The AFL-CIO Executive Committee is reported to have approved funds to encourage and promote the work of the ALHA in providing "technical aid to the trade union groups in development of better health service programs for the benefit of workers and their families."

The letter also stated that the Association "will stand ready to bring experienced technical and legal counsel on request to the defense of the victims of any efforts on the part of medical power groups to destroy programs which endeavor to improve the quality and scope of prepaid health services available to working people and their families."

MEDICOLEGAL MATTERS will be discussed in a series of six articles which will be published weekly in the AMA Journal beginning about September 1. In addition, the AMA Law Department will publish a booklet encompassing the material plus case citations and legal analysis for distribution about October 1.

The purpose of this material is to provide up-to-date information and miscellaneous medicolegal forms which physicians and their attorneys may adapt for their own needs. Some of the subjects covered are autopsies, consent to operations and other medical procedures, patient's right to privacy, confidential communications and records, etc.

THREE NEW EXHIBITS prepared by the AMA will be available for bookings by county medical societies after September 1. The exhibits are (1) "Digestion"—shows the organs involved in digestion, the passage of food through the body, the mechanics of swallowing, the action of the stomach and intestines, and the body's absorption of food. (2) "Alcoholism Is Your Business"—(for professional audiences) gives the viewer an opportunity to eavesdrop on a conversation between a distraught spouse and the family physician over the treatment of alcoholism. (3) "Organs of the Human Body"—three dimensional models of the torso show location of various organs in body and their functions.

THE ARLINGTON COUNTY MEDICAL SOCIETY deserves a "well done" for its booklet entitled "Tell Me, Doctor." The booklet is distributed to newcomers in the Arlington area and explains the purpose and workings of the Society. It covers such items as emergency medical care, public health, civil defense, community cooperation, etc.

Correspondence . . . .

Treatment of Viral Syndromes with a Lipoprotein-Nucleic Acid Compound (Reticulose).

To The Editor:

The failure of antibiotics to inhibit the multiplication of most viruses has caused a continuing search for agents which will favorably affect the course of human viral diseases. In an article entitled "Treatment of viral syndromes with a lipoprotein-nucleic acid compound (Reticulose)," appearing on pages 347-353 of the July, 1957 Virginia Medical Monthly, Drs. Robert H. Anderson and Ralph M. Thompson suggest that the preparation "Reticulose" is capable of modifying certain viral infections of the nervous system. Their contention is based on the report of five patients who improved following the intra-muscular administration of "Reticulose".

The diagnosis in this limited number of cases is based on clinical criteria, unsupported by isolation or serologic studies. The benign course of many viral meningitides is well known. The fever graphs presented are typical of the natural history of "benign aseptic meningitis". Indeed, in one patient (case #4) no fever is present at all and in another patient (case #1) the fever persisted until the fourth day after "Reticulose" was started. In short, we do not believe the evidence presented supports the conclusion that "Reticulose" modified the course of the disease in these patients.

The section which describes the preparation and pharmacology of "Reticulose" is vague and incomplete. The exclusive process said to render the substance non-antigenic is not explained and no toxicity data are reported. The University Research Group said to have demonstrated antiviral activity of "Reticulose" is not identified. Further, although the authors cite an article by Thompson in 1952 suggesting the favorable effect of "Reticulose" on the leucocytic response in irradiated animals, they fail to list an article, "Failure of Reticulose to reduce radiation lethality in mice and rats," by Smith, Ruth, and Cantor in Proc. Soc. Exper. Biol. & Med., 81:116, 1952. These investigators, working at the National Institutes of Health, conducted a carefully controlled experiment utilizing over six hundred animals. They failed to demonstrate any effect of "Reticulose" on mortality, leucocyte count, or incidence of septicemia following whole body irradiation. To our knowledge, no further studies on "Reticulose" in the treatment of the post-irradiation syndrome have been published.

In a consideration of illnesses as diverse and unpredictable as many of the human virus diseases, it is worthwhile to suggest minimal data needed for the evaluation of a proposed antiviral agent:

1. A detailed description of the preparation of the agent
2. Careful pharmacologic and toxicity studies
3. Meticulously constructed controlled clinical trials.

If "Reticulose" can survive these criteria, we will be delighted and a new and exciting era in therapy will begin.

Robert Q. Marston, M.D.
Count D. Gibson, M.D.
Department of Medicine
Medical College of Virginia
July 16, 1957

Cross-Shield-Blue—An Interpretation

To The Editor:

Reading the guest editorial in the July 1957 issue by Dr. Harold W. Miller indicated a certain need for clarification of the Blue Shield contract and the physician's obligation.

The general content of the editorial indicated that Dr. Miller has a sincere feeling of obligation to both the Blue Shield and to the patient but was unable to finely delineate the point at which a patient should be discharged from the hospital or the requirements for hospitalization. In his last paragraph, there was a slight error in his quotation of the Blue Cross-Blue Shield plan. He states that the holder of the plan purchased it for the purpose of using it if and when *he* desires it and thinks it is necessary in case of illness. This should be using it if and when his treating physician desires it and thinks it is necessary in case of illness. The responsibility is clearly placed upon the attending physician.

The responsibility of the treating physician cannot be avoided and I have found it helpful in handling these cases to apply to "yardsticks". I do not admit a patient for hospitalization to have a procedure of diagnostic workup unless I feel that it is neces-

sary and by necessary I mean a need that would exist in a patient who did not have hospitalization. I have found it less difficult to avoid admitting a patient unnecessarily than I have in discharging them at the proper time. This latter can be handled very properly in the following manner. As a patient convalesces, the physician should anticipate in his mind from day to day when he thinks the patient may leave the hospital. Each day he should examine the patient's chart before entering the patient's room. On the day he feels the patient is ready to leave, he should examine the patient's chart and write in his own handwriting and sign his name stating that the patient is ready to be discharged. This information is then conveyed to the patient at the routine visit. One is frequently confronted by the plea, "I do not want to be discharged because I have Blue Cross". To this the conscientious physician can then reply, "It is perfectly all right if you wish to stay two to three more days, however, I have already signed your discharge and your Blue Cross contract states that you are to remain only as long as it is medically necessary. I will be glad to rewrite an order stating that you are to stay at your own expense but it would obviously be incorrect for me to change the order and have you stay at the Blue Cross expense". This is a perfectly fair and understandable statement and the fact that the discharge was accomplished before talking with the patient gives the physician the opportunity to allow the patient to stay as long as he wishes provided he understands that he is staying at his own expense.

Wm. Minor Deyerle, M.D.

Richmond, Virginia
July 12, 1957

Voluntary Health Insurance Coverage

The number of people in Virginia who are covered by voluntary health insurance reached a new high by July 1, according to the Health Insurance Council. As of this date the Council estimates that 1,900,000 persons were protected by some form of insurance designed to help pay hospital and doctor bills.

This figure is part of the continued growth of health insurance throughout the country, which was revealed last May in its 11th annual survey of the extent of voluntary health insurance coverage for 1956. The number of people covered by some form of health insurance in the nation today is more than 118 million, or over 70% of the U.S. civilian population.

In releasing the findings of its survey, which is based on reports of insurance programs of insurance companies, Blue Cross-Blue Shield and other health care plans, the Council went on to say that there were 1,842,000 persons covered by hospital expense insurance in Virginia as of December 31, 1956. The total for 1955 of the number of persons covered for expenses incurred while in the hospital was 1,735,000.

Surgical expense insurance, which helps to defray the cost of physicians' charges for operations rose to 1,542,000, as compared with 1,533,000 the year before.

Persons protected by regular medical expense insurance, providing for doctor visits for non-surgical care, numbered 814,000 in 1956, as against the previous year's figure of 740,000.

The Health Insurance Council, which is a federation of eight insurance associations representing over 90% of the accident and health insurance business handled by insurance companies, stated that this growth reflects the desire of the people of Virginia to help protect themselves against the cost of accident and illness.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Diseases Resembling Poliomyelitis

There is no doubt that some illnesses have been diagnosed as poliomyelitis that are not caused by the virus of poliomyelitis; on the contrary, it is probable that some illnesses resulting from infection with the virus of poliomyelitis have been classified as "undetermined" or as "not polio". For the past twenty years there have been reports of epidemics that in many respects resembled poliomyelitis but in which there was inability to recover the specific virus. We have learned that the Coxsackie type of virus and the so-called ECHO viruses can produce illnesses that suggest poliomyelitis.

Recently inquiries regarding Iceland Disease have been received in the State Department of Health and toward the end of the last school session a physician attending in a girls' college in Virginia thought that she might have observed a few cases, though no study was made of them. Since Iceland Disease presents symptoms and signs that might be readily confused with poliomyelitis, there is presented below a summary of the very excellent study that was made of the original outbreak that gave the disease its name.*

In the fall of 1948 and the early months of 1949, there was an extensive epidemic of a disease involving the central nervous system which occurred on the northern coast of Iceland and included a town and the surrounding country. The disease was first diagnosed as poliomyelitis. The initial case was reported on September 25, 1948, and was severely paralytic as were the following two cases reported around the middle of October. Toward the end of October four more cases were reported and only one developed paralysis, which was slight. At the end of November it was evident that the epidemic differed in many respects from poliomyelitis. The epidemic lasted more than three months during which period 488 cases were reported in the medical district and of these 465 were reported in the town.

All ages from under 1 to 60 were involved. The highest incidence was in the group 15-19 years (15.06 per 100 cases) and the next highest groups were 10-14 years (6.72 per 100 cases), 30-39 (5.49 per 100 cases), and 10-29 (5.06 per 100 cases). The highest incidence of paralysis was in the group 20-29 years in which 10 cases out of 27 reported were paralytic. There was a higher incidence in females than in males. Multiple cases in households was the rule. Schools, except the elementary schools, were heavily struck. It was found that the incubation period was from 5 to 10 days or more.

The lighter, non-paralytic cases showed a fairly uniform clinical picture. The initial symptoms were, as a rule, pains in the nape of the neck and in the back, accompanied by some rise in temperature. Sometimes the onset was sudden but often the patients felt malaise for several days before they went to bed. In general the fever was low while the pulse tended to be relatively more accelerated. The fever lasted from 3 to 7 days. The chief complaint was pain in the neck or back, or both, which frequently radiated to one or more extremities, sometimes accompanied by paresthesias and numbness. The pain might subside with the fever but more often persisted for weeks and tended to get worse on the slightest exertion. Many of the patients were nervous and had a feeling of tiredness quite out of proportion to the illness and temperature and perspired easily.

In the paralytic cases the initial symptoms were as in the non-paralytic although often more pronounced. In the most severe the temperature might rise to 104 degrees and muscular twitchings were often complained of. Paralysis would develop in from 3 to 7 days and at this time the pains usually increased. In several instances this happened after physical exertion or exposure to cold. The paralysis, which was flaccid and symmetrical, varied greatly both in intensity and in extent. In the majority of cases only a single muscle or a group of muscles was affected. A few patients got extensive paralysis of arms, legs, and trunk. In one case a transient paralysis of the tongue was seen but otherwise paralysis was not observed in the region of cranial nerves. The tendon reflexes could be elicited except in the few cases where there was complete paralysis of one or more limbs. The plantar reflex was usually pres-

*Sigurdsson, B.; Sigurjonsson, J.; Sigurdsson, J. H.; Thorkelsson, J. V., and Gudmundsson, K. R.: American Journal of Hygiene, 52: 222, 1950.

ent; the Babinski was never noted. The abdominal reflexes were frequently absent even in cases where there was no paralysis of the abdominal muscles. In the more severe paralytic cases hyperesthesia or hypoalgesia was observed in the afflicted limb. Paresthesias, especially a feeling of cold and numbness of hands and feet, were frequent complaints. A conspicuous symptom was tenderness of the muscles, even in muscles that were not then or later paralyzed. Hypotonia of the muscles was frequently observed and later atrophy sometimes developed.

Stiffness of the neck was found in only a few cases but pain in neck and back was felt by most patients when the head was bent forward. There were no respiratory or alimentary symptoms.

The period of convalescence was protracted, even in milder cases. The milder cases were in bed 2 to 4 weeks and the more severe from 2 to 3 months. Relapses were not infrequent. The pain and tenderness persisted even after the paralysis disappeared. Even more frequent were complaints of nervousness, palpitation, sweating, and sleeplessness. "Tiredness of eyes" was common. There were no deaths.

This disease is believed to have been spread by personal contact. The virus of poliomyelitis was not recovered from any case. Tests for Coxsackie virus on baby mice were negative. Complement-fixation tests of convalescent sera with antigens specific for several of the encephalitides also gave negative results.*

This outbreak well illustrates the need for careful study and accurate diagnosis of every illness resembling poliomyelitis. This is particularly true in this day when Dr. Jonas Salk predicts that polio "will become a rare and ultimately extinct disease."

Monthly Report of Bureau of Communicable Disease Control

	July 1957	July 1956	Jan.-July 1957	Jan.-July 1956
Brucellosis	5	2	17	13
Diphtheria	4	0	12	21
Hepatitis	18	23	286	310
Measles	283	853	4609	23297
Meningococcal Infections	7	6	47	59
Meningitis (Other)	110	6	208	71
Poliomyelitis	13	22	30	41
Rabies (In Animals)	32	15	209	212
Rocky Mt. Spotted Fever	6	8	22	21
Streptococcal Infections	308	198	4551	3914
Tularemia	0	4	19	16
Typhoid Fever	6	5	25	27

Cycloplegia and the Optometrist

It has been brought to our attention that occasionally practicing physicians have been asked to administer cycloplegic medicine for optometrists so that the optometrist may then refract (fit glasses) to children and complicated refraction cases. It is also noted that certain M.D.'s do not know that optometrists are not medically trained and not legally allowed to use or prescribe medicine in any form. They are not doctors of medicine and only use the title of doctor because of state legislative action.

Although this has happened in only a few isolated instances, the dangers involved are considerable.

First, there are cases in which a cycloplegic may be disastrous; namely, in cases of glaucoma in which the patient might become blind. This is especially true of the narrow angle acute type of glaucoma in patients who may never have had a previous attack. This type of eye can only be safely recognized by a well trained ophthalmologist.

Secondly, malpractice suits against the optometrist would not apply, as he is not a doctor and did not prescribe the drug. The M.D. would bear the brunt of legal action and rightly so.

Optometrists are not trained to the degree that they can judge the type of case needing cycloplegia and the great majority of them realize this and do not compromise a friendly physician in this way.

An editorial by Drs. H. F. Hill and R. N. Dennis, published in the Maine Medical Journal, February 1957.

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

The Problem of Oldsters.

In Congress two bills* are "in the hopper", both of which would "prohibit insurance companies . . . from issuing group health, hospitalization, and accident insurance which may be cancelled . . . for any reason other than nonpayment of premium." This proposed legislation is not of the type physicians are apt to sponsor; it would further extend the encroachment of federal control over free enterprise. More specifically, such legislation not only would vitiate the 1945 declaration of Congress that the states should have exclusive jurisdiction over insurance operations, but it would also establish one more precedent for possible federal regulation of other activities that should be controlled, directly or indirectly, by the medical profession and the public the profession serves.

The general public, however, excepting through federal laws such as the two now being proposed, cannot properly control health insurance. It can exert control only through the economic law of supply and demand—by altering the demand-side of the equation. But, as in most things of a medical nature, the public does not know what to demand. Just as self-medication is ineffectual more often than not, and frequently dangerous, the public's acceptance of health insurance nostrums that are compounded without professional guidance is apt to get the public into serious difficulties. The public is familiar with dollars and cents, but not with medical-economics; accordingly, the public is prone to base its decisions regarding health insurance solely upon the dollar-and-cent considerations that appear pertinent today—and by doing so it is lighting the fuse of a bomb which, tomorrow, is going to blast our medical-economic structure sky-high. It is time doctors started writing all health insurance prescriptions.

True enough, doctors help write Blue Cross-Blue Shield's contractual provisions, which fact explains why a Blue Cross-Blue Shield member can retain his membership regardless of his attained age and regardless of his deterioration as a health "risk". It explains not only why a retiree from a Blue Cross-Blue Shield Group can keep his Contract but also why, upon the oldster's death, his widow can indefinitely continue the Contract in her own name.

Also true enough, as previously reported on this page[1], insurance companies can and sometimes do provide continuing coverages. Unfortunately, however, they do not in general make it feasible for an insured to carry his protection into his oldster years, and it is indeed a rare insurance plan which makes any provision whatsoever for a widow.

Even under their new, so-called "comprehensive" plans, as under their other indemnity plans, insurance carriers leave inclusion of a conversion privilege to the discretion of their clients. Their clients, patently, are watching pennies—not looking out for the future of American medicine. But any group prepayment plan which fails to provide for continued coverage of persons who retire from or otherwise leave the group is creating medical-economic problems, not solving them. The same holds true for any individual prepayment plan under which deterioration of the risk brings about cancellation of coverage. A plan which carries a person throughout his healthier and more productive years and then drops him when he becomes a "poor risk", when he can obtain no other coverage, and when he is most apt to need prepaid health care services—such a plan is selfishly adding to the problem of medical indigency. Unfortunately, the socially-oriented prepayment plans which are trying to solve that problem will never be able to pick up all the deteriorated risks that are being sloughed off by other plans.

Providing for adequate health care of *all* is a social or community enterprise, not a business enterprise per se. But even those health-care prepayment plans that are offered as a side-line to a regular insurance business can be adapted to this fundamental axiom. If any one commercial insurance carrier eschews its social responsibilities, is unwilling to have its premium rates reflect the cost of taking care of America's "oldsters", is unwilling to "force" employers and active employees to absorb some of the cost of retirees' care—such a carrier

*H.R. 5041 (Rhodes of Pennsylvania) and H.R. 7087 (Christopher of Missouri).

should be black-balled from the health-care field. It is of no help at all; it is a hindrance.

The medical profession cannot hope to regulate the operations of insurance companies the way it controls Blue Cross-Blue Shield, but the medical profession can officially, publicly, and loudly "disapprove" any organization or company that issues to any person or group a policy which, through omission of proper and equitable conversion privileges, is adding to our medical-economic problems —on the solution of which the future of American medicine depends. Were the profession to do so, the insurance industry might then incorporate provisions for continued coverage in all of its policies and offer these policies on a take-it-or-leave-it basis, just as the socially-oriented plans are doing. Tailoring a plan to suit a special group is fine, to a certain extent, but no group or no carrier, because of medical-economic myopia, should be permitted voluntarily to create problems that voluntary enterprise cannot solve.

It is expected that by 1975, 21,000,000 persons in this country will be 65 or older[2]. It is not just a minor problem, this health insurance coverage for oldsters, it is one which warrants the profession's thought—and action.

1. "Prepaid Medical Care", Virginia Medical Monthly, April 1957, P. 198.
2. "Medical Insurance and the Retired Employee", Management Record, Nov. 1956, P. 386.

Motive for Living

When some centenarian explains his long life as the result of not arguing before breakfast or of drinking a pint of corn whiskey with lunch, scientists listen with interest. They have discovered that comments like these fortify a medical conviction that sustained growth and vigor in old age depend to a large degree on some positive motive for living. Without motive, a person might be "old" at 35, with it he might be "young" at 70, according to a special article on aging in the July 27th Journal of the American Medical Association.

The population of Americans over 65 is increasing at twice the rate of the over-all population rise. With the increase in numbers there is developing the problem of "how to create a proper climate for senior citizens to grow with their age rather than stagnate in a tremendously expensive wait for death," an accompanying editorial said.

"Since medical science is largely responsible for this increased longevity, physicians everywhere must bear much of the burden of also prolonging man's span of vigor. It is a mammoth task, calling for action and planning in many fields besides medicine."

The aged population represents a still-untapped source of "manpower and brainpower that can be turned from an economic liability into a total asset." However, there must be careful community planning and coordination of various agencies and facilities.

The A.M.A., through its committee on aging, soon will publish guides for state and county medical societies to help them organize with allied medical and lay groups in meeting specific needs of the aging in their own areas.

The A.M.A. committee on aging has agreed that "retirement should not be based arbitrarily on chronological age," but that employment in all age brackets should be a matter of proper assignment of skills.

The committee is drafting a physical examination form which will help companies and physicians evaluate a worker's particular capabilities. It is also trying to devise an A.Q. (aging quotient) test based on physiological and psychological factors. Such a test would help the employer decide whether a man should retire or be moved to a less taxing job.

Mental Health . . . .

MARGARET CAVEY

Nursing Needs in Virginia's State Mental Institutions

The quality of psychiatric nursing care rendered to the hospitalized patients in our state mental institutions is in direct relationship to the number of registered nurses employed in each institution. Although there has been an increase in the number of registered nurses employed, it is estimated that three times the present number is needed if anticipated goals of improved patient care and rehabilitation are to be reached.

Number of Registered Nurses Employed

	(May 31)		
	1937	*1947*	*1957*
Eastern State Hospital	9	5	21
Western State Hospital	5	7	20
Southwestern State Hospital	2	3	13
Central State Hospital	12	8	25
Lynchburg Training School and Hospital	3	3	31
Petersburg Training School and Hospital	—	—	3
	31	26	113

The registered nurse is the member of the nursing team who is able to render comprehensive nursing care in all fields, in addition to organizing, planning, and directing the work of others. She possesses the professional skills, techniques, and knowledge which enable her to recognize the patient's physical, emotional, and spiritual needs. Other members of the nursing team include the licensed practical nurses and attendants.

As of July 1, 1957, there were 53 licensed practical nurses and 1,788 attendants employed in our four hospitals and two training schools. To insure the safe practice of nursing, it is essential that a well organized in-service educational program be in effect in each instituton. We feel that there should be four types of programs—Orientation Program, Skill Training Program, Continuing Education Program, and Leadership and Management Development Program. Briefly, the Orientation Program is focused on assisting the employee to adjust to a new situation —hospital, department, or unit, while the Skill Training Program will provide the employee with the skills, techniques, and attitudes which will permit her to function as a member of the nursing service in a psychiatric setting.

One cannot review the literature in the field of psychiatry for the past ten years without realizing the changes in philosophy and treatment which have occurred. Such a program as the Continuing Education Program enables the employee to keep abreast with current trends in psychiatric nursing. Serious consideration must be given to developing our potentional leaders within each institution. Programs in Leadership and Management Developing prepare the employee for increasing responsibilities. Participants in such a program should include head nurses, nurse supervisors, attendant supervisors, and charge attendants.

Although one nurse instructor in each institution is conducting the educational program, she is limited in her work because of the broad scope of her teaching responsibility. Needless to say, additional nurses are needed in each institution to conduct all of the above mentioned programs, in addition to more attendants to provide adequate staffing while other employees are participating in these programs.

Not only must we have adequate numbers of employees, but there must be a constant evaluation of the performance of each employee in terms of function and proper utilization. Adequate supervision on all tours of duty—day, afternoon, and night —is imperative; yet in some institutions, supervision during the afternoon and night tour of duty is very limited.

In recent years the administration of the tranquilizing drugs to patients has become a major and time-consuming procedure. There are approximately one-third of the patients in the four mental hospitals on drug therapy. For example, on a ward of 103 patients at Central State Hospital, 90 doses are administered by the nurses or the attendants in a twenty-four hour period. With such a heavy work assignment, very little time can be spent by the

MARGARET CAVEY, *Director Psychiatric Nursing Education, Department of Mental Hygiene and Hospitals.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

attendant in interacting with patients. This should be an important phase of psychiatric nursing. It is estimated that twice the present number of attendants is needed.

There is a need for a Mental Health Nurse Consultant on a state level who would work with medical, nursing, and other professional personnel in planning the total program for mental health nursing services. She would also serve as consultant to local health departments and staff personnel in general hospitals on matters pertaining to mental health nursing, as well as stimulate interest in nursing education in mental health on the basic and graduate level.

Early Rehabilitation

Early rehabilitation training after a spinal cord injury reduces the cost and length of training and the dangers of other physical complications. In addition, rehabilitation helps patients become independent in movement and self-care, thus allowing them to "live their lives with greater dignity and deeper satisfaction," according to an article in the August 3rd Journal of the American Medical Association.

It is pointed out that the problem of spinal cord injury and paralysis has largely been identified with war injuries, because of publicity given to rehabilitation techniques developed during World War II. However, "it is not generally appreciated" that during World War II only 2,500 such casualties occurred among American troops, while 15,000 such disabilities occurred among civilians. Since the end of the war, attention has been focused on the problem among civilians, and specialized centers for rehabilitation are growing, although not nearly rapidly enough.

All paralyzed patients face the probability of many physical complications occurring. Prolonged bedrest appears to increase the chances of such urologic, neurological, and orthopedic complications. The earlier rehabilitation is started, the less the danger of these. In addition, the period of rehabilitation is shortened, because fewer surgical and medical correction are needed. In turn, the cost of training is reduced. More important, the rehabilitation training helps these paralyzed patients in their psychological adjustments.

Thirty-one patients paralyzed by spinal cord injuries were treated at the Institute of Physical Medicine and Rehabilitation of the New York University-Bellevue Medical Center. For the 20 patients with complications, the length of training averaged 30 days longer than for those without complications because of time spent on surgical and medical care. The average cost for those needing treatment for complications was $4,467.28, as compared with $1,794.46 for those requiring only rehabilitation training.

The patients were sent to New York by the Division of Vocational Rehabilitation of the Department of Education of Georgia. The 26 men and five women ranged in age from 18 to 46 years and the duration of their illnesses ranged from less than one year to more than 10 years. Their spinal cord injuries and paralysis resulted from auto, diving and hunting accidents, blows from moving objects, falls and gunshot wounds.

At the time of admission, 22 were incapable of any type of ambulation and 10 were bed patients. At discharge 27 had some degree of proficiency in walking with braces and crutches, and 24 were able to get in and out of a car unassisted.

A one-year follow-up showed that most of these patients had maintained, or improved, their ambulation skills, and that 42 per cent had returned to work and 32 per cent were in training. This is in contrast to the 22 per cent who were employed and 78 per cent who were economically dependent before training.

Nearly all the patients felt they had made a "good" or "very good" psychological adjustment, even in the face of continuing physical complications, lack of employment and lack of educational background. The doctors attributed this to the fact that these people had gained some measure of independence in self-care and movement, which brought with it gains in "dignity and psychological health."

The authors are Drs. S. Harry Berns, Edward W. Lowman, Howard A. Rusk and Donald A. Covalt of the New York University-Bellevue Medical Center.

PRELIMINARY PROGRAM

110th MEETING

The Medical Society of Virginia

HOTEL SHOREHAM
WASHINGTON, D. C.
OCTOBER 27-30

PRELIMINARY PROGRAM

110TH MEETING

THE MEDICAL SOCIETY OF VIRGINIA

HOTEL SHOREHAM

WASHINGTON, D. C.

OCTOBER 27, 28, 29 AND 30, 1957

Sunday, October 27
1:00 P.M.

COUNCIL
North Room

7:00 P.M.
House of Delegates—Dinner Meeting
West Ballroom

Monday Morning, October 28
9:00 A.M.

Section A—West Ballroom

JAMES D. HAGOOD, M.D., Clover, Presiding

9:00 A.M.—Welcome and Preliminary Announcements—Presiding Officer

9:05 A.M.—THE DEVELOPMENT OF GENERAL MEDICAL SERVICES FOR THE INDIGENT—R. W. Jessee, M.D., Lebanon

This paper outlines a program designed by local practicing physicians, the Health Department and Department of Public Welfare to provide general medical services to public assistance recipients in a rural area.

9:25 A.M.—CLINICAL STUDIES WITH DEXTROTEST—A SIMPLIFIED BLOOD SUGAR TEST—James M. Moss, M.D., Alexandria

A new method of blood sugar determination, that can be carried out at the bedside in less than 5 minutes, is presented. The test is based upon the reduction of copper by the glucose contained in the concentrated deproteinized filtrate of venous blood. The author has used this test over 2,000 times.

9:45 A.M.—RENAL COMPLICATIONS IN GOUT—John J. Kelly, III, M.D., Richmond

Eleven of ninety consecutive cases of gout have been found to have significant renal abnormalities. The mechanisms for some of these are at present incompletely understood and require further study. The need for effective gout management in their control is discussed and emphasized.

10:05 A.M.—THERAPY FOR SUICIDAL PATIENTS—WILLIAM F. GIBBS, M.D., Norfolk

Theories of suicidal attempts—extent of symptoms. Prediction of attempts. Consistent problem of reactivation of suicidal wishes necessitates control of environmental as well as personal problems. Useful psychotherapeutic measures, drugs, timing of referral to psychiatrist and hospital.

10:25 A.M.
Recess to visit Exhibits

11:00 A.M.—WHIPLASH INJURY OF THE CERVICAL SPINE—John S. Thiemeyer, Jr., M.D., Norfolk

"Whiplash" injury seems to be the modern day successor of the "Railroad Spine" of the early 1900's and like its ancestor is closely related to the litigation aspect of medicine. A series of 123 neck injuries seen in 1956 is reviewed as regards pathology and relationship to medicolegal aspects.

11:20 A.M.—ELECTROLYTE PROBLEMS IN CONGESTIVE HEART FAILURE—Julian R. Beckwith, M.D., Emery Ward, M.D., Nuzhet Atuk, M.D., and J. Edwin Wood, Jr., M.D., Charlottesville

A brief resume of the pathological physiology of heart failure will be presented and the electrolyte changes which result from heart failure per se will be reviewed. The abnormalities which may occur as the result of vigorous therapy, including their diagnosis and management, will be presented. The discussion will be illustrated with slides and case reports.

11:40 A.M.—A CLINICAL ANALYSIS OF 50 PATIENTS WITH APLASTIC ANEMIA—Daniel N. Mohler, M.D., Harry R. Yates, Jr., M.D., and Byrd S. Leavell, M.D., Charlottesville

The incidence, physical findings, hematological findings, treatment, remission rate, prognosis, and cause of death in 50 patients with aplastic anemia are presented.

Section B—Terrace Banquet Room

REVERDY H. JONES, JR., M.D., Roanoke, Presiding

9:00 A.M.—Welcome and Preliminary Announcements—Presiding Officer

9:05 A.M.—Hypothyroidism without Myxedema—Leslie W. Rose, Jr., M.D., Richmond

For each patient showing the gross changes of myxedema, there are probably 100 hypothyroid patients without myxedema. The varied symptoms of hypothyroidism are none-the-less disturbing to those patients—and diagnosis is often delayed or not made at all due to the absence of the classical physical signs of myxedema. The symptomatology of the milder hypothyroid state is presented with aids for recognition and confirmatory diagnosis of this fairly prevalent disorder.

9:25 A.M.—Esophageal Hiatus Hernia—Frank Philip Coleman, M.D., and Antonio P. Tirone, M.D., Richmond

Awareness of the frequency and protean behavior of hiatus hernia is necessary to the proper interpretation of retrosternal and upper gastro-intestinal symptoms. Evaluation of etiology, pathology, mechanism of symptoms, symptom complexes, complications, and treatment of 305 patients with hiatus hernia form the basis of this report.

9:45 A.M.—A Year's Experience with a Co^{60} Radiation Therapy Unit—George Cooper, Jr., M.D., Charlottesville

Operation of a Co^{60} unit was commenced on July 1, 1956. The patients treated during the first year will be reviewed and compared with a similar group treated with 250 K V x-ray therapy.

10:05 A.M.—The Treatment of Metastatic Carcinoma—Charles S. White, M.D., Washington, D. C.

The medical and surgical treatment of metastatic cancer is discussed. The pros and cons of telling the patient the hopelessness of his disease are presented, and the various agents that we have utilized, including x-ray, surgical castration, and local and parenteral use of Thiotepa, are described. Three cases of metastatic carcinoma in which good results with a satisfactory degree of salvage are presented as examples that all cases of this type are not hopeless.

10:25 A.M.
Recess to visit Exhibits

11:00 A.M.—The Pros and Cons of Prophylactic Anticoagulant Therapy Following Myocardial Infarctions—James B. Twyman, M.D., Charlottesville

This mode of therapy is discussed under three headings: (1) The life expectancy in the treated and the untreated cases; (2) The incidence of recurrent coronary occlusion and/or thrombo-embolic disease in each group; (3) The hazards and drawbacks of long term anticoagulant treatment. Slides are employed to illustrate these three topics.

11:20 A.M.—Clinical Experiences with the Anticoagulant, Warfarin Sodium ("Coumadin")—Reno R. Porter, M.D., David Richardson, M.D., and H. Page Mauck, Jr., M.D., Richmond

This is a report on the use of Warfarin sodium ("Coumadin") as an anticoagulant. This drug, which can be given orally or intravenously, lowers the prothrombin activity to therapeutic ranges within one to two days, with the effect persisting for several days. Compared with Dicumarol, the more commonly used anticoagulant, Coumadin is more rapid in the onset of therapeutic effects, has a more predictable dosage, and control of prothrombin activity is easier to attain.

11:40 A.M.—Anticoagulants, Theoretical Considerations and Laboratory Control—Henry G. Kupfer, M.D., Richmond

Recent advances in the knowledge of influence of anticoagulants on the clotting mechanism are presented. Factors influenced by Dicumarol and by Heparin are discussed. Methods of their evaluation, preferable to "prothrombin time", are given; pitfalls and improvements of "clotting time" are pointed out. Vitamin K_1 and K_3 differ greatly in mode of absorption and should be selected on this basis.

Monday Afternoon, October 28
2:30 P.M.

General Session—West Ballroom

Ira L. Hancock, M.D., Creeds, Presiding

2:30 P.M.—*Guest Speaker*—John H. Talbott, M.D., Professor of Medicine, University of Buffalo, New York—Diagnosis and Treatment of Gout and Gouty Arthritis

3:15 P.M.—*Guest Speaker*—Colonel Thomas W. Mattingly, M.C., Chief, Cardiovascular Service, Walter Reed General Hospital, Washington, D. C.—Cardiovascular Manifestation of Tumors of the Adrenal Gland

4:00 P.M.—*Guest Speaker*—Owen Gwathmey, M.D., Department of Surgery, George Washington University, Washington, D.C.—Blebs and Bullae

5:00 P.M.—Annual Meeting of Virginia Medical Service Association

Monday Evening, October 28
8:30 P.M.

West Ballroom

Call to Order—J. R. B. Hutchinson, M.D., Arlington, Chairman, Committee on Arrangements

Invocation

Awarding of Certificates to Members of "Fifty Year Club"

Memorial Observance—A. P. Jones, M.D., Roanoke, Chairman, Membership Committee

Address by President—James D. Hagood, M.D., Clover

Address by Joseph C. Robert, President, Hampden-Sydney College, Hampden-Sydney, Virginia

Tuesday Morning, October 29
9:00 A.M.

Section A—West Ballroom

J. P. Sutherland, M.D., Harman, Presiding

9:00 A.M.—Atherosclerotic Disease of the Abdominal Aorta and Iliac Arteries—Eugene L. Lowenberg, M.D., Norfolk

Atherosclerotic disease may manifest itself as: (1) A partial stenosis of the aorta or iliac arteries; (2) a segmental occlusion of the iliac vessels; (3) classic Leriche's syndrome. Lantern slides illustrating the pathology and treatment of the disease will be shown. A 24 case series will be presented.

9:20 A.M.—Gonadal Dysgenesis—Guy Hollifield, M.D., K. R. Crispell, M.D., William Parson, M.D., and W. N. Thornton, Jr., M.D., Charlottesville

A clinical and laboratory description of thirteen "apparent" females with evidence of primary gonadal dysgenesis will be presented with comments on theories of sex differentiation in the human.

9:40 A.M.—Experience in the Treatment of Severe Hypertension with Mecamylamine (Inversine)—H. Page Mauck, Jr., M.D., Allan M. Unger, M.D., and Reno Porter, M.D., Richmond

Observations have been made in fourteen patients with severe hypertension treated with Mecamylamine and reserpine. Postural hypotensive effect was produced early in treatment but tended to disappear. Side effects were frequent and the results were poor.

10:00 A.M.—The Treatment of Asthmatic Bronchitis Including Use of Steroids and Antibiotics—J. Warrick Thomas, M.D., Nancy B. King, M.D., and Marion W. Fisher, M.D., Richmond

The authors review a group of six children with ages varying from one to eight years having bronchial asthma complicated by infections, asthmatic bronchitis or recurrent attacks of asthma. These patients were treated with steroid and antibiotic therapy.

10:20 A.M.—The Present Day Treatment of Tuberculosis in Childhood—Edwin L. Kendig, Jr., M.D., Richmond

The treatment of primary tuberculosis and its complications has probably undergone as much change as the treatment of any other disease and it is still changing. Present day treatment of uncomplicated primary tuberculosis and the so-called "progressive primary" disease will be discussed.

10:40 A.M.
Recess to visit Exhibits

11:00 A.M.—Asymptomatic Cancer of the Lung—Thomas N. P. Johns, M.D., and Louis B. Massad, Richmond

In lung cancer, curability is governed less by early diagnosis than by the biological characteristics of the tumor. Advanced cancer is described in patients with no symptoms. Radical surgery is occasionally indicated, but more conservative therapy is preferable in most pulmonary cancer.

11:20 A.M.—Review of Gastrectomies in a One Hundred and Seventy-Five Bed Community Hospital—Williams M. Delaney, M.D., and Fernando Grotte, M.D., Alexandria

A statistical review of gastrectomies in a one hundred and seventy-five bed community hospital evaluating the results with those obtained in larger hospitals and teaching institutions.

11:40 A.M.—An Aggressive Attack on Head and Neck Cancer—C. C. Coleman, Jr., M.D., Charlottesville

The purpose of this presentation is to point out the methods of reconstructing large defects of the head and neck following an aggressive attack for cancer. Adequate surgery for carcinoma of the head and neck often results in severe deformities. Various methods used in head and neck reconstruction will be described and illustrated by the use of kodachrome transparencies.

Section B—Terrace Banquet Room

Obstetrical and Gynecological Symposium

9:15 A.M.—The Diagnosis and Treatment of Ectopic Pregnancies—H. Hudnall Ware, M.D., Richmond

9:30 A.M.—Indications for Hysterectomy—John M. Nokes, M.D., Charlottesville

10:30 A.M.—*Guest Speaker*—Paul O. Klingensmith, M.D., Associate Professor of Obstetrics and Gynecology, University of Pennsylvania Hos-

pital, Pennsylvania—The Diagnosis and Management of Fetal Distress

11:00 A.M.—Panel—Discussion of Selected Maternal Deaths Occurring in Virginia in 1956

Tuesday Afternoon, October 29
2:30 P.M.

General Session—Terrace Banquet Room

Fletcher D. Woodward, M.D., Charlottesville, Presiding

Panel—Prevention of Automobile Injuries and Deaths

2:30 P.M.—General Meeting Aspects—Dr. Woodward

2:50 P.M.—*Guest Speaker*—R. Arnold Griswold, M.D., Member, Sub-Committee on Engineering Aspects of Automobile Injuries and Deaths; Member of Committee on Trauma of the American College of Surgeons, Louisville, Kentucky—Injury Prevention Aspects

3:10 P.M.—Motion Picture "On Impact"—Ford Motor Company, Detroit, Michigan. Sponsored by the American Medical Association

3:30 P.M.—*Guest Speaker*—Honorable Kenneth A. Roberts, Alabama, Congress of the United States; Chairman, Special Committee on Traffic Safety, House of Representatives, Washington, D. C.—Legislative Aspects

3:50 P.M.—Charles J. Frankel, M.D., Charlottesville—Legal Aspects

4:10 P.M.—*Guest Speaker*—John J. Agnew, Deputy Chief-in-Charge of Traffic, Metropolitan Police Department, Washington, D. C.—Police Aspects

4:30 P.M.—General Discussion

The House of Delegates will meet in the Club Room at 4:00 P.M.

6:00 P.M.
Cocktail Party—Lower Main Lobby

7:00 P.M.
Banquet and Entertainment
Terrace Banquet Room

Installation of Harry C. Bates, Jr., M.D., as President

Wednesday Morning, October 30
9:00 A.M.

General Session—West Ballroom

Reverdy H. Jones, Jr., M.D., Roanoke, Presiding

9:00 A.M.—Panel—Religion and Medicine

Guest Speaker—The Reverend Thomas J. O'Donnell, S. J., Regent and Dean of Students, Georgetown Medical School, Washington, D. C.

Guest Speaker—The Reverend Albert T. Mollegen, Professor of New Testament Language and Literature, Virginia Theological Seminary, Alexandria

Guest Speaker—Rabbi Emmett A. Frank, Beth El Hebrew Congregation of Northern Virginia, Alexandria

10:00 A.M.—*Guest Speaker*—Leo H. Bartemeier, M.D., Chairman, Council on Mental Health, American Medical Association, Baltimore, Maryland—Specific Suggestions for the Care of Patients Suffering from Emotional Disorders

10:30 A.M.
Recess to visit Exhibits

11:00 A.M.—Clinical Pathological Conference—Richard E. Palmer, M.D., Alexandria—Moderator

IMPORTANT ANNOUNCEMENT

Papers to be presented on the Scientific Program will be limited to fifteen minutes. Discussion, time permitting, will be restricted to five minutes. It is requested that no one discuss the same paper more than once.

All papers are the property of The Medical Society of Virginia and following presentation should be handed the presiding officer.

TECHNICAL EXHIBITS

Technical Exhibits will be in the Ballroom and on Birdcage Walk. The following is a list of these exhibits with a brief description:

Booth No. 1
A. S. Aloe Company
Washington, D. C.

"One complete source for the Doctor and Hospital."
Be sure to visit our booth and see the latest in doctors' examining furniture, surgical supplies, electrical medicine equipment, and for the laboratory.

Booth No. 2
McLain Surgical Supply of Virginia
Charlottesville, Virginia

Booth No. 3
Physicians Products Company
Petersburg, Virginia

We are extending you an official invitation to visit the Physicians Products Company. You will find in attendance there F. A. "Dick" Frayser, Jr., Craig Parsons, and W. C. Comstock. They will be glad to supply you with such data and supplies as you may desire, relative to our products.

Booth No. 4
The Stuart Company
Chicago, Illinois

The Stuart Company invites all physicians attending The Medical Society of Virginia meeting to visit our booth. Our representatives will be glad to answer any of your questions on our products.

Booth No. 5
The Baker Laboratories
Cleveland, Ohio

You are invited to visit our booth where Baker's Modified Milk and Varamel, two successful products for infant feeding, are on display.
Baker representatives will be glad to discuss with you the special features of Baker Milk products which promote better tolerance, less colic, better gain and improved tissue turgor for bottle-fed infants.

Booth No. 6
Sandoz Pharmaceuticals
Hanover, New Jersey

Booth No. 7
J. B. Roerig and Company
Chicago, Illinois

J. B. Roerig and Company will feature ATARAX, the new "Peace of Mind" drug. It's an all new chemical and is specially indicated for the "more normal" person, to bring relief from the common everyday tensions and anxieties. Co-featured with ATARAX will be BONADOXIN, the anti-emetic for relief of the nausea and vomiting of pregnancy; also effective in postanesthetic nausea and postradiation sickness. Literature and samples available to physicians at the booth which you and your friends are cordially invited to visit.

Booth No. 8
Desitin Chemical Company
Providence, Rhode Island

DESITIN OINTMENT—the pioneer cod liver oil ointment for the treatment of burns, ulcers, wounds, diaper rash. DESITIN POWDER—pioneer cod liver oil dusting powder for the treatment of intertrigo, diaper rash, exanthema, abrasions, etc. DESITIN HEMORRHOIDAL SUPPOSITORIES—relieve pain and itching, promote healing, give comfort in uncomplicated hemorrhoids, fissues. Contain no anesthetic or styptics. RECTAL DESITIN OINTMENT—for effective relief in simple hemorrhoids, pruritus and fissures. No anesthetics. DESITIN LOTION —soothing, protective, mildly astringent for the treatment of pruritus, poison ivy and non-specific dermatitis. DESITIN COSMETIC & NURSERY SOAP—supermild, nonallergenic, pleasantly scented, deodorant.

Booth No. 9
Medco Products Company
Philadelphia, Pennsylvania

The manufacturers of the very popular Medcolator present the new three-way MEDCO-SONLATOR which combines the benefits of neuromuscular stimulation (as produced by the Medcolator) plus the advantages of ultrasonic therapy, all in one compact unit. Electrical muscle stimulation and ultrasound may be produced simultaneously (or separately) through a patented three-way applicator or transducer. Better results in treating many conditions may be expected from this combined unit.

Booth No. 11
Hoffman-La Roche
Nutley, New Jersey

GANTRIMYCIN combines 333 mg. Gantrisin with 75 mg. oleandomycin for use in a wide variety of bacterial infections. Oleandomycin is a new antibiotic principally active against gram-positive microorganisms. It does not display cross resistance with most other antibiotics. Gantrisin is effective against both gram-positive and gram-negative pathogens. It is soluble in acid urine. No alkalization or forcing of fluids is needed.

LIPO GANTRISIN—usually provides therapeutic antibacterial blood levels for 12 hours with a single dose. Just two doses a day are adequate in most infections. Each teaspoonful of Lipo Gantrisin contains one gram Gantrisin Acetyl, twice the concentration of most aqueous sulfonamide suspensions. Useful in respiratory, localized, systemic, and urinary tract infections, when due to susceptible microorganisms.

Booth No. 12

R. J. Reynolds Tobacco Company

Winston-Salem, North Carolina

Welcome to the R. J. Reynolds Tobacco Company Exhibit! You are cordially invited to receive a cigarette case (monogrammed with your initials) containing your choice of CAMEL, WINSTON Filter, Menthol Fresh SALEM, or CAVALIER King Size Cigarettes.

Booth No. 13

Burroughs Wellcome & Company

Tuckahoe, New York

The extensive research facilities of "B. W. & Co.", both here and in other countries, are directed to the development of improved therapeutic agents and techniques. Also much basic theoretical work in our laboratories and in cooperation with internationally known institutions is contributing to the reservoir of fundamental medical knowledge.

Through such research "B. W. & Co." has made notable advances related to leukemia, malaria, diabetes, and diseases of the autonomic nervous system; and to antibiotic, muscle-relaxant, antihistaminic, and antinauseant drugs.

An informed staff at our booth will welcome the opportunity to discuss our products and latest developments with you.

Booth No. 14

The S. E. Massengill Company

Bristol, Tennessee

Products being featured: Andrenosem Salicylate (the unique systemic hemostat), Homagenets (the only homogenized vitamins in solid form), Salcort (a safe effective anti-arthritic), Massengill Powder and Saferon (the peptonized iron).

Booth No. 15

Knoll Pharmaceutical Company

Orange, New Jersey

Oral METRAZOL is indicated for the aged patient where senile confusion, convalescence or fatigue are present. Recent information concerning the use of METRAZOL and its position as a therapeutic agent in the field of Geriatrics is available for your information.

Information is also available concerning the use of DILAUDID, QUADRINAL, TENSODIN and the other preparations of our manufacture.

Booth No. 16

The Wm. S. Merrell Company

Cincinnati, Ohio

BENDECTIN, a new and exceptionally effective antinauseant; and TACE, the "treatment of choice" for suppression of lactation will be featured. You are invited to discuss these and other Merrell research products with our representatives.

Booth No. 17

The Coca-Cola Company

New York, New York

Ice cold Coca-Cola served through the cooperation and courtesy of the Coca-Cola Bottling Works of Silver Spring, Maryland, and The Coca-Cola Company.

Booth No. 18

Parke, Davis and Company

Detroit, Michigan

Medical service members of our staff will be in attendance at our exhibit for consultation and discussion of various products of particular interest to members of the Society. Important specialties such as Penicillin S-R, Benadryl, Chloromycetin, Ambodryl, Dilantin Suspension, Vitamins, Oxycel, Milontin, Eldec, Amphedase, Thrombin Topical, etc., will be featured. You are cordially invited to visit our exhibit.

Booth No. 19

Ross Laboratories

Columbus, Ohio

CURRENT CONCEPTS IN INFANT FEEDING, stressing the critical aspects of preventive care. Your Similac Representative will be happy to discuss to the role of physiologic feeding in providing good growth, sound development, and optimum clinical benefits. Copies of the latest Ross Pediatric Research Conference Reports are available.

Booth No. 21

Hart Drug Corporation

Miami, Florida

Hart Drug Corporation, celebrating its 30th year manufacturing quality pharmaceuticals for the medical profession welcomes you to Hart booth. Mr. E. R. Andrews, your Hart representative, will be featuring EFEDRON, Hart Nasal Jelly, HARTGEL, the improved antacids, OTORAL, Hart's ear drops.

Booth No. 23

Charles C. Haskell & Company

Richmond, Virginia

Representatives will be present to welcome visiting physicians and to answer any inquiries regarding our ethical prescription specialties, such as our BELBARB family (sedative-spasmolytic), HASAMAL-HASACODE (analgesic), IROSUL-C (hematinic with vitamin C), PANTABEEROID (thyroid therapy), and other rational therapeutic combinations.

Booth No. 27

Ortho Pharmaceutical Corporation

Raritan, New Jersey

Ortho cordially invites you to Booth 27. Featured will be DELFEN Vaginal Cream, Ortho's most spermicidal contraceptive. DELFEN Vaginal Cream has a high concentration of a new, most potent, well-tolerated spermicide. Since the spermicide is in the water phase of an oil-in-water emulsion, it rapidly invades seminal fluids, killing sperm on contact. It is emollient and nonirritating to vaginal tissues. ORTHO representatives welcome this opportunity to discuss their products with you.

Booth No. 30
Doho Chemical Corporation
New York, New York

Doho Chemical Corporation is pleased to exhibit: AURALGAN, ear medication in otitis media and removal of cerumen. OTOSMOSAN, effective, non-toxic fungicidal and bactericidal (gram negative-gram positive) in the suppurative and aural dermatomycotic ears. RHINALGAN, nasal decongestant free from systemic or circulatory effect and equally safe to use on infants as well as the aged. New LARYLGAN, soothing throat spray and gargle for infectious and non-infectious sore throat involvements.

Mallon Chemical Corporation, subsidiary of the Doho Chemical Corporation, is also featuring: RECTALGAN, liquid topical anesthesia for relief of pain and discomfiture in hemorrhoids, pruritus and perineal suturing. DERMOPLAST, aerosol freon propellant spray for fast relief of surface pain, itching, burns and abrasions. Also obstetrical and gynecological use.

Booth No. 32
Milex of New York
Long Island City, New York

The new Milex Cancer Detection Program will be presented to our many friends who register at our booth. Routine uterine and cervical smears can near eliminate the mortality factor in uterine and cervical carcinoma. The family physician is the first line of defense in cancer detection. Milex will display the most recent development, making cancer detection a simple routine office procedure.

Also featured will be the Milex Folding Pessaries for retroversion, prolapse and cystocele. These pessaries can be folded, shaped without heating, and are boilable for sterilization.

Booth No. 33
The Borden Company
New York, New York

There's no better place to talk over the latest information on infant feeding than the Borden Prescription Products booth. On display is the complete line of Borden infant formula products for every feeding purpose or preference. If you're encountering hyperirritability or excoriation, you'll be interested in BREMIL, a formula patterned upon breast milk. If you suspect milk allergy in some of your patients, you'll find the answer in either Liquid or Powdered MULL-SOY, leading hypoallergenic food. For prematures, or for digestive disturbances demanding low fat and high protein, DRYCO provides an ideal, flexible formula base.

Booth No. 34
E. R. Squibb & Sons
New York, New York

E. R. Squibb & Sons has long been a leader in development or new therapeutic agents for prevention and treatment of disease. The results of our diligent research are available to the Medical Profession in new products or improvements in products already marketed.

At our booth, we are pleased to present up-to-date information on these advances for your consideration.

Booth No. 35
Pet Milk Company
St. Louis, Missouri

We will be pleased to have you stop and discuss the variety of time-saving material available to busy physicians. Our representatives will be on hand to discuss the merits of "Pet" Evaporated Milk for infant feeding and INSTANT "Pet" Nonfat Dry Milk for special diets. A miniature "Pet" Evaporated Milk can will be given to all visitors.

Booth No. 36
U. S. Vitamin Corporation
New York, New York

NEW—on display—ARLIDIN, the safe vasodilator drug with three unique pharmacologic actions: (1) dilates predominantly small blood vessels of skeletal muscle, (2) increases cardiac output without significant increase in pulse rate, (3) promotes greater circulating blood volume. Thus, ARLIDIN (Nylidrin HCl. NNR) is indicated in treating intermittent claudication in arteriosclerosis obliterans, thromboangiitis obliterans, and diabetic vascular disease; also effective in Raynaud's Syndrome and ischemic ulcers.

Booth No. 37
VanPelt and Brown
Richmond, Virginia

VanPelt and Brown extend a cordial invitation to visit their exhibit where representatives will be happy to answer questions and supply clinical samples of their products.

Booth No. 38
Zimmer-Baxter Associates
Charlotte, North Carolina

Booth No. 39
Schering Corporation
Bloomfield, New Jersey

An informed staff of Schering representatives will welcome the opportunity to discuss the latest therapeutic developments and clinical data on TRILAFON, CHLORTRIMETON and the METI drugs.

Booth No. 40
Pfizer Laboratories
Brooklyn, New York

The Pfizer exhibit spotlights its recent and original therapeutic concepts represented by SIGNEMYCIN (brand of Oleandomycin), a combination of Matromycin and Tetracyn; and the newest advance in topical corticosteroid therapy, Magnacort and Neo-Magnacort, the first water soluble corticoid. Also featured are MODERIL, Pfizer's new alkaloid of rauwolfia; ATAXAROID, the first and only ataraxic-corticoid, as well as Bonamine and Sterane.

Booth No. 41
Eli Lilly and Company
Indianapolis, Indiana

You are cordially invited to visit the Lilly exhibit located in space number 41. The Lilly sales people in attendance welcome your questions about Lilly products and recent therapeutic developments.

Booth No. 42
Peoples Drug Stores
Washington, D. C.

Peoples Drug Stores, Incorporated, welcome the members of The Medical Society of Virginia to Washington, our home town! You are cordially invited to visit our booth. Representatives of our company will be on hand to greet you and furnish information concerning the professional services offered to physicians.

Booth No. 43
G. S. Searle & Company
Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Nilevar, the new anabolic agent; Rolicton, the new safe, non-mercurial oral diuretic; Vallestril, the new synthetic estrogen with extremely low incidence of side reactions; Banthine and Pro-Banthine, the standards in anti-cholinergic therapy; and Dramamine, for the prevention and treatment of motion sickness and other nauseas.

Booth No. 44
Lederle Laboratories Division
American Cyanamid Company
New York, New York

You are cordially invited to visit the Lederle Booth where our Medical Representatives will be in attendance to provide the latest information available on our line. Featured will be Achromycin V. Kynex, and many other of our dependable quality products.

Booth No. 45
Abbott Laboratories
North Chicago, Illinois

HARMONYL®, a new tranquilizer and antihypertensive agent, will be among the new products Abbott Laboratories will exhibit. Other products to be shown will include a new therapeutic agent for peptic ulcer, TRAL®; an aerosol solution for treatment of chronic pulmonary disease, TERGEMIST®; an anticonvulsant for control of grand mal epilepsy, PEGANONE®; an aid in the management of atherosclerosis, SAFF, and Abbott's complete line of intravenous solutions and equipment.

Booth No. 46
Davies, Rose & Company
Boston, Massachusetts

It is with pleasure that we again have the opportunity to bring our products to the attention of the members of The Medical Society of Virginia.

Among our laboratory products, Pil. Digitalis and Tablets Quinidine Sulfate (Natural) have won the confidence of the cardiologist who knows that he can always rely on their constant and dependable potency.

Our representative, Mr. James B. Mattison, will be in attendance to welcome you and to discuss these outstanding cardiac therapies as well as the serviceability of our preparations.

Booth No. 47
A. H. Robins Company
Richmond, Virginia

Physicians attending the meeting of The Medical Society of Virginia are cordially invited to visit the exhibit of the products of the A. H. Robins Company.

Experienced medical representatives will be in attendance to welcome you and answer inquiries relative to any of Robins prescription specialties.

Booth No. 48
The National Drug Company
Philadelphia, Pennsylvania

The National Drug Company exhibit highlights PARENZYME. The efficacy of PARENZYME (the direct, anti-edema, anti-inflammatory agent) is clinically substantiated for the treatment of traumatic wounds, ulceration, phlebitis, occular inflammation and for loosening of bronchial plugs in severe pulmonary disease. Our representatives will look forward to discussing PARENZYME and other National products with you, so please stop by.

Booth No. 49
Eaton Laboratories
Norwich, New York

Announcing—New, lifesaving FURADANTIN® Intravenous Solution for severe infections. Often rapidly effective as: in bacteremia, peritonitis, and other bacterial infections as of postoperative wounds, and abscesses, when the organism is susceptible to Furadantin; in severe genitourinary tract infections when the patient is unable to take Furadantin by mouth.

Furadantin is one of the most effective and rapidly acting agents available at this time for the treatment of prostatitis and acute and chronic urinary tract infections.

Furadantin has specific affinity for the urinary tract, producing anti-bacterial concentration in 30 minutes. Six years of extensive use demonstrate negligible development of bacterial resistance.

Booth No. 50
Westwood Pharmaceuticals
Buffalo, New York

FOSTEX CREAM and FOSTEX CAKE are new, easy to use, therapeutically effective cleansing type medications for the treatment of dandruff, acne vulgaris and seborrheic dermatitis. They contain Sebulytic*, a unique combination of penetrating anionic soapless cleansers and wetting agents which are highly antiseborrheic, and exert antibacterial and keratolytic effects.

*Trademark

Booth No. 51
Wm. P. Poythress & Company
Richmond, Virginia

The Poythress exhibit will feature Trilute, outstanding new corrective for primary dysmenorrhea. Solfoton—widely prescribed sedative, Panalgesic—local analgesic counterirritant agent. Mudrane—excellent in bronchial asthma will also be represented, as will Uro-Phosphate—established urinary antiseptic, and T.C.S.—for the management of the moderately advanced cardiac and hypertensive. Your visit at booth No. 51 is cordially invited. Mr. George Ingram will be in charge.

Booth No. 52
Ciba Pharmaceutical Products
Summit, New Jersey

The CIBA exhibit presents Pyribenzamine Lontabs, a totally new concept in long-acting antihistamines. The unique structure of the Lontab, incorporating a special core and a new-type shell, provides speedy and sustained antiallergic action up to 12 hours. Most patients, therefore, require only 2 tablets every 24 hours to enjoy continuous relief of troublesome allergic symptoms.

Booth No. 53
Mead Johnson & Company
Evansville, Indiana

The Mead Johnson exhibit has been arranged to give you the optimum in quick service and complete product information. The exhibit will be staffed by specially trained representatives who will be prepared to provide you with information on any of these products or product "families": (1) Tempra—the first physician controlled antipyretic/analgesic in drop and teaspoon dosage form. (2) The Mead Johnson Formula Products Family—the most complete feeding service for well and sick infants. (3) The Deca Vitamin Family—vitamins in three convenient dosage forms providing comprehensive vitamin protection for infants and children. (4) The Pablum Products—featuring the new Pablum Assorted-Pak. (5) The Colace Products Family for the management of constipation.

Booth No. 54
Ames Company
Elkhart, Indiana

The Ames Company exhibit will feature an entirely new concept in the detection and evaluation of proteinuria—a new colorimetric test supplied in two forms: ALBUTEST Tablets and ALBUSTIX Reagent Strips. Results are obtained in seconds. Demonstration by Ames representatives will show the many advantages of this new principle.

Booth No. 55
W. B. Saunders Company
Philadelphia, Pennsylvania

Earl Dunham will again be on hand with the complete Saunders' line. Of special interest are these titles, all published within the last several months: Dripps et al—"Anesthesia"; Levine—"Clinical Heart Disease"; Cecil & Conn—"Specialties in General Practice; Mulholland et al—"Current Surgical Management" and Rodriguez—"Cardiac Surgery".

Always new are the Medical, Surgical and Pediatric Clinics of North America.

Booth No. 56
Ayerst Laboratories
New York, New York

Physicians are cordially invited to visit the Ayerst Exhibit where our representatives will be in attendance to discuss Ayerst Products of interest to you. Featured products will be "Premarin" with Meprobamate which offers a simple, sensible answer to the challenging problem of orienting the menopausal patient suffering from unusual emotional stress; "Thiosulfil", the markedly soluble and sparingly acetylated sufonamide specially designed for treatment of urinary tract infections due to sulfonamide-sensitive bacteria.

Booth No. 57
Johnson & Johnson
New Brunswick, New York

Johnson & Johnson will display the latest improvements in surgical dressings, as developed by the Johnson & Johnson Research Laboratories. In addition, Johnson's Elastic Hosiery and Johnson's Baby Products will be exhibited. You will find well-informed representatives pleased to discuss these products or provide information on any other items made available by the world's largest manufacturer of surgical dressings and baby products.

Booth No. 58
Dome Chemicals
New York, New York

Dome Chemicals, Inc., cordially invites you to examine their new products: SOY-DOME CREME, the new soapless skin cleanser; COR-TAR-QUIN CREME (pH 5.0), combining hydrocortisone alcohol with liquor carbonis detergens and diiodohydroxyquinoline in the exclusive Acid Mantle Vehicle; NEO-CORT-DOME CREME (pH 4.6), containing neomycin sulfate combined with the well known CORT-DOME CREME (½% and 1% hydrocortisone free alcohol), for inflammatory pruritic and allergic dermatoses; VLEM-DOME, the modernized Vleminckx's Solution for acne; VI-DOM-A-C ORAL TABS for buccal absorption of Vitamins A and C in the treatment of oral diseases locally and skin diseases systemically; DOME-BORO Wet dressings for all skin inflammations, regardless of cause; ACID MANTLE CREME (pH 4.2) and LOTION (pH 4.5) for restoring and maintaining normal skin acidity; and CORT-DOME CREME (pH 4.6) and LOTION (pH 4.6), in ½%, 1% and 2% concentrations of micronized hydrocortisone alcohol in the exclusive Acid Mantle vehicle.

Booth No. 59
Geigy Chemical Corporation
Yonkers, New York

Editorial....

Facing the Realities of the Nurse Shortage

OUR NATIONAL concern for health services is fast approaching our concern for food, clothing, and shelter. Hospital admissions have more than trebled in twenty years and now two and one-half million persons daily receive some kind of nursing service. Thus, about one out of sixty of us continuously calls on nurses for some form of ministration.

I assume that when we face the realities of the nurse shortage we begin to do what is done in handling other shortages, money, for example: we use wisely any money we may have and endeavor at the same time to make or secure more of it. Therefore, I wish to address myself to two phases of the nurse shortage, *utilization* or wise use of nurses and the *production of more nurses.*

But first, what is the extent of the nurse shortage? This question was recently addressed to 500 hospital administrators, 5000 physicians and 13,000 nurses. The results indicate an almost tragic situation. The national nurses shortage is estimated to be 70,000; the Virginia shortage, from 1500 to 2000, despite an increase in the number of Virginia schools of nursing by 50 per cent in twenty years, and at the same time by almost a 100 per cent increase in graduates, with a corresponding increase in nurses admitted to examination.

There are many reasons for the nurse shortage, but I shall point to only one at this time. Many others have dealt with the multiple factors involved. In Virginia we have built, or are building 4223 Hill-Burton hospital beds at a cost of $80,800,000 to which we have contributed out of Virginia tax funds $7,300,000. On this account alone the demand upon available nurses has far exceeded the supply. We know of a good many hospital beds still closed for lack of nurses. We also know that nursing services generally in our hospitals are thin and forced to operate on a day by day basis. The pity of it all is that the public generally does not know this and does not also know that the situation is likely to get worse before it gets better, regardless of how prompt action may be taken to improve the situation.

A program of immediate and vigorous action is proposed. This, with everybody's help, is not easy. Just as it is easier to construct school buildings than it is to staff them, so it is easier to build hospitals and clinics than it is to staff them. Any program for action is relatively futile, unless many participate in such a program. Here are basic elements of an action program for Virginia, for we must solve our own problems:

1. Encourage appropriate utilization of nurses on the various services: don't allow a nurse to do anything which some other person can do passably well. This means that every operating unit of the hospital, such as the dietary department, housekeeping, pharmacy, and so forth, should discharge its own responsibilities with its own personnel, without calling on nurses to help, except in real emergencies.

2. Provide satisfactory working conditions, rates of pay, hours, living arrangements, things to work with, opportunities for professional growth, et cetera.

3. Build up the 31 Virginia diploma schools of nursing to minimum enrollments of 75 students.

4. Secure more funds for schools of nursing either from taxes or philanthropy, or both.

5. Enlarge and increase the support for the two state supported schools of nursing, at the University of Virginia and the Medical College of Virginia. This is a *must* for enlarging enrollments.

6. Bid every citizen, physicians in particular, help with recruitment of at least one per cent more of high school graduates for enrollment in schools of nursing; otherwise, our goal cannot be met.

7. Enroll men students in nursing; marriage will not end their services.

8. Ask doctors to hold back on turning over more tasks or functions to nurses until we get out of the present emergency.

9. Substitute other personnel for a considerable number of nurses now working in doctors offices.

10. Bring pressure for the appropriation of state funds, ear marked to supplement the Hill-Burton funds, for the construction of nurses dormitories and teaching facilities.

11. Put the growing nurse shortage daily before the general public, doctors, nurses, teachers, preachers, civic groups, and anybody who will listen; otherwise, we fail in our responsibility to broadcast the plight we now face—a plight which continues to worsen with no end in sight.

Finally, the new two-year junior college program offers considerable promise; it leads to the degree of associate in arts or science and admits to examination for registered professional nurses. This is an intensive course of eleven months each year, requires good students, a high ratio of teachers to students who can't be expected to replace staff nurses.

During the next school year the Medical College of Virginia will attempt to recruit students for its proposed two-year junior college course in nursing for admission, September, 1958.

W. T. Sanger, Ph.D.

Dr. Sanger is Chancellor of the Medical College of Virginia.

Society Proceedings . . . .

Alleghany-Bath Medical Society.

At the meeting of this Society at Warm Springs on July 24th, Dr. N. B. Jeter, Covington, was elected president succeeding Dr. Donald Myers. Other officers are Dr. T. N. Warren, Clifton Forge, vice-president, and Dr. R. P. Hawkins, secretary-treasurer. Dr. Hawkins is serving for his 35th consecutive year.

Rockbridge County Medical Society.

At a meeting on July 17th, Dr. Brooke B. Mallory, Lexington, was elected president, and Dr. O. Hunter McClung, Lexington, secretary-treasurer.

Culpeper County Medical Society.

On July 30th, the following officers were elected: President, Dr. J. Bernard Jones; vice-president, Dr. Rupert W. Quaintance; and secretary, Dr. James P. Baker. All officers are from Culpeper.

Fairfax County.

The June Dinner-Dance of the Fairfax County Medical Society was held on the 20th at the Fairfax Courthouse Country Club. Guests of honor were Dr. Eugene Grether, president of the Alexandria Medical Society, and Mrs. Grether; Dr. K. C. Latven, president of the Arlington County Medical Society, and Mrs. Latven; and Mrs. Andrew Tessitore, president of the Woman's Auxiliary, and Dr. Tessitore.

Highlight of the dinner was the presentation to Dr. Gerard J. Inguagiato, president, of a certificate of recognition for his service to the Society. The presentation was made by Dr. Thomas E. Haggerty, president-elect.

Arlington County.

The annual June Dinner-Dance was held at the Army Navy Country Club on the 27th. There were approximately 120 persons attending.

Highlight of the dinner was the presentation of the Fourth Annual Welburn Award to Dr. Lloyd B. Burk, Jr., for outstanding service to medicine. Dr. K. C. Latven, president, cited Dr. Burk as the sponsor of the Medical Bulletin of Northern Virginia, one of the principal organizers of the Medical Dental Building Corporation, and first president of the Northern Virginia Academy of Surgeons.

Dr. Hermann F. Diamant, immediate past president, was presented a certificate of meritorious service to the Society.

The Southwestern Virginia Medical Society

Will hold its annual fall meeting in Roanoke at the Hotel Roanoke on September 12th. The evening speaker will be Dr. Philip A. Tumulty, Associate Professor of Medicine, Johns Hopkins University. His subject will be The Clinical Course of Systemic Lupus.

The afternoon program will consist of several individual papers and a panel on "Rheumatic Diseases". Dr. Lawrence Shulman, Chief of the Arthritic Clinic of Johns Hopkins University, will be the moderator. Other members include Dr. Tumulty, Dr. Alexander McCausland, Dr. James G. Snead, and Dr. Roy M. Hoover, all of Roanoke.

News . .

Readership Survey.

The Monthly is conducting a readership survey and your attention is called to page 5 in the advertising section of this issue. Please read this carefully, fill it out and return to the Monthly. This is a very important survey, both from the standpoint of your journal and the advertisers, and we urge your full cooperation. Results of the survey will be made available to our advertisers and the future of our advertising program depends on your interest.

New Members.

Since the list published in the August issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Herbert C. Hoover, M.D., Petersburg
Maynard Herman Law, M.D., Roanoke
Maurice Myles Miller, M.D., Norfolk
Leopold S. Moreno, M.D., Norfolk
Arthur McKinley Reynolds, Jr., M.D., Berryville
Joseph Paul Smith, Jr., M.D., Norfolk

Henry Morse Tanner, Jr., M.D., South Hill
Albert Julian Wasserman, M.D., Richmond

Changes in A.M.A. Administrative Setup.

The American Medical Association has announced two changes in its administrative setup. Dr. George F. Lull, who has been secretary-general manager for 11 years, has been elevated to the newly-created position of assistant to the president. He will continue serving as secretary, which is an elective office. In his new job, Dr. Lull will relieve the president of the Association of many of the burdens of his office, which have become especially heavy in the last few years. He will serve as spokesman, troubleshooter, listening post, information center and as an ambassador of the medical profession in cities and towns throughout the country.

Dr. F. J. L. Blasingame, Wharton, Texas, has been appointed to the position of general manager. He will take over his new duties on January 1, 1958. Dr. Blasingame has been active in medical affairs, both at the state and national level, for many years. When the A.M.A. House of Delegates elected him as a member of the Board of Trustees in 1949, he was one of the youngest physicians ever chosen. Since then, he has held many important committee appointments.

Dr. Harry Walker,

Acting chairman of the Department of Medicine at the Medical College of Virginia, has been appointed as professor of medicine and chairman of the department. This appointment is for one year in accordance with Dr. Walker's wishes.

American Board of Obstetrics and Gynecology.

Virginia doctors who were certified by this Board on May 25th are: Dr. Herbert A. Claiborne, Charlottesville; Dr. William H. Cox, Richmond; Dr. John Q. Hatten, Newport News; Dr. James N. Psimas, Portsmouth; Dr. Peter Soyster, Falls Church; and Dr. DeWitt S. True, Portsmouth.

Dr. Washington C. Winn,

Richmond, will speak on Toxemias of Pregnancy at the ninth annual meeting and scientific assembly of the Maryland Academy of General Practice to be held at Easton, October 9 and 10.

Dr. J. G. McNiel.

Assistant director of local health services of the State Department of Health, will serve as acting director of the Tri-County-Suffolk district pending the appointment of a successor to Dr. H. D. Crow, deceased.

New Hospital for Northern Virginia.

A $4,000,000 private hospital, headed by a group of Falls Church, Alexandria and Arlington physicians and surgeons, will be built in the next two years. The hospital is to be known as the Northern Virginia Doctors Hospital. A corporation has been formed to finance and operate the hospital with Dr. Robert A. Rounds, Falls Church, as president. Dr. William N. Spence, Arlington, is vice-president, Dr. Thomas E. Haggerty, Falls Church, secretary, and Dr. Morgan Delaney, Alexandria, treasurer.

The hospital at the beginning will probably be a 250 bed institution, with a possible expansion to 500 rooms.

Dr. Chichester Retires.

After nearly forty years in public health, twenty of which were spent in the central office of the Virginia State Department of Health, Dr. Peyton M. Chichester, Richmond, Assistant Director of the Division of Local Services, retired on June 30th.

Dr. Thomas P. Overton,

Richmond, has been elected president of the Virginia Chapter, National Nephrosis Foundation.

Heart Association Fellowships.

The Virginia Heart Association announces that $28,975 of its funds are being used for heart research and medical educational fellowships at the Medical College of Virginia and the University of Virginia during this fiscal year.

Dr. Reno R. Porter, Medical College of Virginia, is studying the "Effects of Digitalis on the Heart and Circulation". His program is receiving a grant-in-aid from the Peninsula Heart Association, Newport News. Dr. Edwin Wood and Julian R. Beckwith are conducting a study at the University of Virginia Hospital on "Total Circulating Sodium, Plasma Volume Ratio in Patients with Hyponatremia following Cardiac Surgery and in Patients with Congestive Heart Failure". The Tidewater Heart Association, Norfolk, is contributing to the support of the research by Dr. J. Francis Dammann, Jr., University of Virginia, on "Control of Pulse Rate by Electronic Square Wave Cardiac Stimulator".

The Gill Memorial Eye, Ear and Throat Hospital,

Roanoke, will hold its Thirty-First Annual Spring Clinic in Ophthalmology, Otolaryngology and allied specialties, April 14-19, 1958.

Among the guest speakers invited to participate are: Dr. David B. Allman, Atlantic City, N. J.; Dr. Edwin N. Broyles, Baltimore; Dr. John F. Conley, New York; Dr. George Crile, Cleveland; Dr. Fred W. Dixon, Cleveland, Dr. Gehard Domagk, Germany; Dr. Leon Goldman, Cincinnati; Dr. Roscoe J. Kennedy, Cleveland; Dr. Perrin H. Long, Brooklyn; Dr. S. C. Missal, Cleveland; Dr. C. Stewart Nash, Rochester; Dr. Edward W. D. Norton, New York; Dr. Donald M. Shafer, New York; Dr. Benjamin H. Shuster, Philadelphia; Dr. Byron Smith, New York; Dr. Richard C. Troutman, Brooklyn; Dr. Henry Wagener, Rochester; Dr. Fred Walsh, Baltimore; Dr. James C. Watts, Washington; Dr. Lorenz Zimmerman, Washington; and Dr. J. V. Nicholls, Montreal, Canada.

Virginia Doctors.

An inventory made by the Federal Defense Administration shows that Virginia has 3,384 physicians for its 3,318,680 citizens. There are 10,999 civilian general hospital beds, 1,649 for mental patients and 152 for tubercular patients. There are 109 first aid stations in Virginia. This inventory was made for the operation alert which ended in July.

Mr. Troy Howell Hutchinson, III,

Charlottesville, who is entering his fourth year at the University of Virginia, School of Medicine, has been awarded a $500.00 scholarship for research and clinical training in the field of allergic diseases. This is awarded by the American Foundation of Allergic Diseases and is one of twenty scholarships. Mr. Hutchinson is working on the study of Anaphylactogenic properties of Soluble Antigen-Antibody Complexes and their Relationship to Quantitative Antibody Determinations under the direction of Dr. Oscar Swineford, Jr., Professor of Internal Medicine.

Interstate Postgraduate Medical Association Meeting.

The Interstate 42nd International Medical Assembly of the Postgraduate Medical Association of North America will be held at the Palmer House, Chicago, September 30-October 3. The program is planned with diversification and practical presentations which make it of special value to the generalist. Speakers of national and international prominence are on the program.

Program and full information may be obtained by Dr. J. Mather Pfeiffenberger, President, Box 1109, Madison 1, Wisconsin.

The Academy of Psychosomatic Medicine.

The program of the fourth annual meeting of the Academy to be held October 17-19 at the Morrison Hotel, Chicago, will be devoted to Psychosomatic Aspects of Obstetrics, Gynecology, Endocrinology and Diseases of Metabolism. The purpose of the Academy is to teach psychosomatic medicine in a manner assimilable to the general practitioner and non-psychiatrically oriented physician.

Information may be obtained from Dr. William S. Kroger, Secretary, 104 South Michigan Avenue, Chicago 3, Illinois.

Wanted.

Two full time general practitioners or psychiatrists to work on psychiatric service of 2000-bed hospital, in medical and cultural locality. Full-time salary range $6000 to $10,320 (plus 25% for certification) with retirement, insurance, leave and other government benefits. Citizenship and license by some state required. Contact Manager, VA Hospital, Roanoke 17, Va. (*Adv.*)

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Part-Time Work Wanted.

Able eye, ear, nose and throat specialist, Diplomate in otolaryngology, experienced refractionist and audiologist, about to retire from active practice, would like part-time clinical work with a reputable specialist or group. Please give full details. H. J. K., care the Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Obituaries . . . .

Dr. Charles Augustus Young, Sr.,

Prominent physician of Roanoke, died July 25th, at the age of sixty-seven. He was a graduate in medicine of the University of Maryland, class of 1914. Dr. Young specialized in ophthalmology and had practiced in Roanoke since 1923. He was on the staffs of the Lewis-Gale, Jefferson, Roanoke Memorial and Shenandoah Hospitals and was a consultant at the Roanoke Veterans Administration Hospital.

Dr. Young was a former president of the Roanoke Academy of Medicine and the Virginia Society of Ophthalmology and Otolaryngology. He had been a member of The Medical Society of Virginia for thirty-three years.

His wife, two daughters, and a son, Dr. Charles A. Young, Jr., survive him.

Dr. John Boyd Stone,

Well-known Churchville physician, died July 20th, at the age of seventy-one. He was found in his car, having died of a heart attack while responding to a sick call. Dr. Stone was a graduate in medicine of the University of Virginia in 1912 and he had practiced in Augusta County for forty years. He was a member of The Medical Society of Virginia, having joined in 1918.

An Editorial in the Staunton News Leader stated that Dr. Stone "was typical of the country doctors who responded to calls regardless of time of day, weather, distance, or prospect of fee. He chose to spend his whole professional life in this unselfish way of ministration to suffering people, although he was considerated a talented diagnostician. . . ."

His wife survives him.

Dr. Hubert Dinwiddie Crow,

45-year-old director of the Tri-County-Suffolk health district, comprised of Isle of Wight, Nansemond, Southampton counties and the City of Suffolk, died Sunday, July 21st, of a coronary attack at his home in Suffolk.

A 1938 graduate of the Medical College of Virginia, Dr. Crow practiced medicine for two years in Buckingham County before entering the field of public health in 1940 as assistant health officer for Brunswick-Greensville-Mecklenburg health district. In 1941 he was assigned as health officer to Southampton County. He left there in 1947 to attend Johns Hopkins University School of Hygiene and Public Health, where he obtained his master's degree in public health. He returned to the State Health Department in 1948 and was assigned as health officer of the newly created district of Fredericksburg, King George and Stafford Counties, remaining there until 1955. He then returned to Suffolk as health director of the Tri-County-Suffolk district.

Dr. Crow was a member of The Medical Society of Virginia, having joined in 1940.

His wife and a son survive him.

Dr. Hardy

The Staff of Southside Community Hospital, the Town of Farmville, and the State of Virginia, sustained a great and lasting loss through the death on June 24, 1957, of Dr. Thomas Griffin Hardy.

An outstanding physician and clinician, Dr. Hardy early developed his interest and ability in surgery and became one of the most capable and respected general surgeons in Virginia. In spite of his interest in his specialty, Dr. Hardy never forgot nor gave up his interest in the every day problems of his patients, whether these problems were of a surgical nature or not. He brought to his specialty and to the practice of medicine a profound knowledge of and sympathy for human problems and relations.

Dr. Hardy was a prime mover in the organization and establishment of Southside Community Hospital. It was largely because of his surgical experience and ability that the first staff of our hospital could be organized and could function. Through the years, until the beginning of his last illness, his interest and work in this hospital were unfailing and always stimulating. His searching and discriminating mind brought innovation after innovation into the operating room, and into every other department of the hospital. His teaching ability was keenly demonstrated time after time during the years they had residency house staff.

Of as much importance as his work in the hospital was Dr. Hardy's role as gracious and courteous representative of our group to the State Society and throughout Virginia in other groups of physicians. No one in Virginia was more widely known, sought after, and admired—truly he was without a peer in his profession and in society.

Although the years will bring changes—new growth and development in our institution—the good and lasting influence of Dr. Thomas Hardy will not be forgotten. He was truly a great man.

A. Tyree Finch, *Chairman*
W. E. Smith
J. H. Smith

Dr. Hopkins

On April 27, 1957, the Patrick-Henry Medical Society, as well as the medical profession as a whole, lost, through

death, one of its devoted and beloved members, Dr. Brewster Arthur Hopkins.

Dr. Hopkins was born in Patrick County, Virginia, on December 5, 1903. His elementary education was obtained in the local schools of his native county. He received his academic college training at Hampden-Sydney College. He then entered the Medical College of Virginia, receiving the degree of Doctor of Medicine in 1929. Following graduation from Medical College he interned at City Memorial Hospital in Winston-Salem, North Carolina. Upon completion of his internship, he served for two and a half years as Senior Assistant Physician on the staff of Central State Hospital at Petersburg, Virginia. In 1933 he began the general practice of medicine in Stuart, Virginia, which practice he pursued until his death.

During his professional career Dr. Hopkins formed many friendships and had many contacts with his professional colleagues. He was a member and past president of the Patrick-Henry Medical Society; past president, and at the time of his death, director of the Virginia Academy of General Practice; a member of The Medical Society of Virginia, Southern Medical Association, Tri-State Medical Society, American Medical Association and the American Academy of General Practice.

In his home community he was one of the leaders in his profession and was active in community life. He was an elder in the Stuart Presbyterian Church, a past president of the Stuart Rotary Club, past master of his Masonic Lodge, past patron of the Stuart Chapter of the Order of Eastern Star, examining physician of the Patrick County Selective Service Board and Patrick County Medical Examiner.

Dr. Hopkins had a devoted practice and worked diligently and faithfully with all he served. He was a good physician, a true friend and congenial companion.

Therefore Be It Resolved by the Patrick-Henry Medical Society that we extend to the bereaved family our deepest sympathy and share with them in the loss of an esteemed friend, brilliant physician and loyal colleague.

Be It Further Resolved that these resolutions be spread upon the pages of the minutes of the Patrick-Henry Medical Society and a copy be sent to the bereaved family, The Medical Society of Virginia and to the Virginia Academy of General Practice.

W. C. Akers, M.D.
E. T. McNamee, M.D.
W. N. Thompson, M.D., *Chairman*

Dr. Arnette

Dr. Clarence E. Arnette, well-known and well-loved Alexandria physician, died at Circle Terrace Hospital in Alexandria on May 12, 1957, after a long illness.

He was born in Saltville, Virginia, 52 years ago, and at an early age started doing things for others, one of his prized possessions being a letter from President Woodrow Wilson, commending him for selling more Savings Stamps than any other Boy Scout.

Dr. Arnette's true love of people was demonstratd by the fact that he belonged to a great number of organizations. He was Vice President of the Virginia State Society, he was President of the Alexandria Hospital Medical Staff in 1947, Past President of the Medical College of Virginia Alumni Association, and at one time Vice-President of the Alexandria Medical Society. He was an active member of several Masonic groups in the area and of the Washington Street Methodist Church.

A beloved physician and a devoted husband and father, Dr. Arnette will be greatly missed.

Therefore, Be It Resolved, that the Alexandria Medical Society, the medical profession in general, and the community at large have suffered a great loss in the death of Dr. Arnette, and

Be It Further Resolved, that a copy of this Resolution be spread upon the minutes of the Alexandria Medical Society, and that copies be sent to the family and to the Virginia Medical Monthly.

Haskins Ferrell, Jr., M.D., *Chairman*
Charles V. Amole, M.D.
John A. Sims, M.D.

Dr. Yuter

Dr. Daniel Yuter, prominent Alexandria general practitioner for eleven years, died at the Alexandria Hospital on April 13, 1957.

He was born December 2, 1914, in Baltimore, Maryland, and was educated in the public schools there and in Charlottesville, Virginia. Following his graduation from the School of Medicine at the University of Virginia in 1942, he served an internship at Sinai Hospital in Baltimore. Later, he served with distinction in the United States Army, being discharged with the rank of Major in 1946. Dr. Yuter began the practice of medicine in Alexandria in that year.

Dr. Yuter was a member of the Veterans of Foreign Wars, the Agudas Achim Congregation, the B'nai B'rith, the Zionist Club of Northern Virginia, and the Alexandria Medical Society, which latter organization he faithfully served as Secretary, member of the Executive Committee, and in many other capacities.

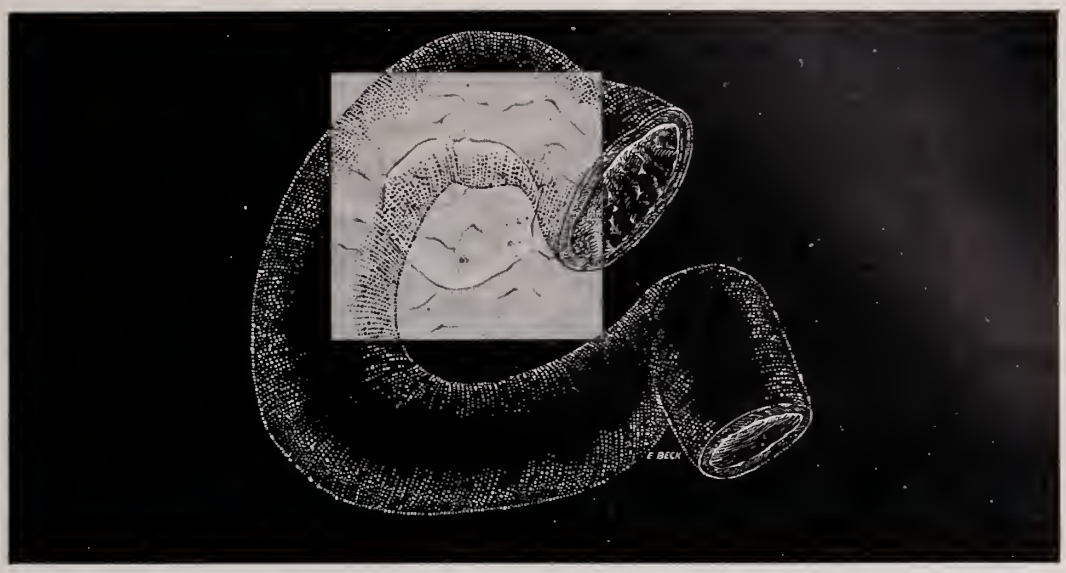
Always ready to accept any burden or responsibility, Dr. Yuter had all the qualifications and characteristics of the true family doctor. He was sincerely interested in the complete well-being of his patients, and during his eleven years of practice he enjoyed the love and respect of hundreds of people.

Therefore, Be It Resolved, that Dr. Yuter's untimely death is a major loss to this community and to the medical profession, and that we, his friends, shall greatly miss him, and

Be It Further Resolved, that a copy of this Resolution be spread on the minutes of the Alexandria Medical Society, and that copies be sent to the family and to the Virginia Medical Monthly.

Haskins Ferrell, Jr., M.D., *Chairman*
Ben C. Jones, Jr., M.D.
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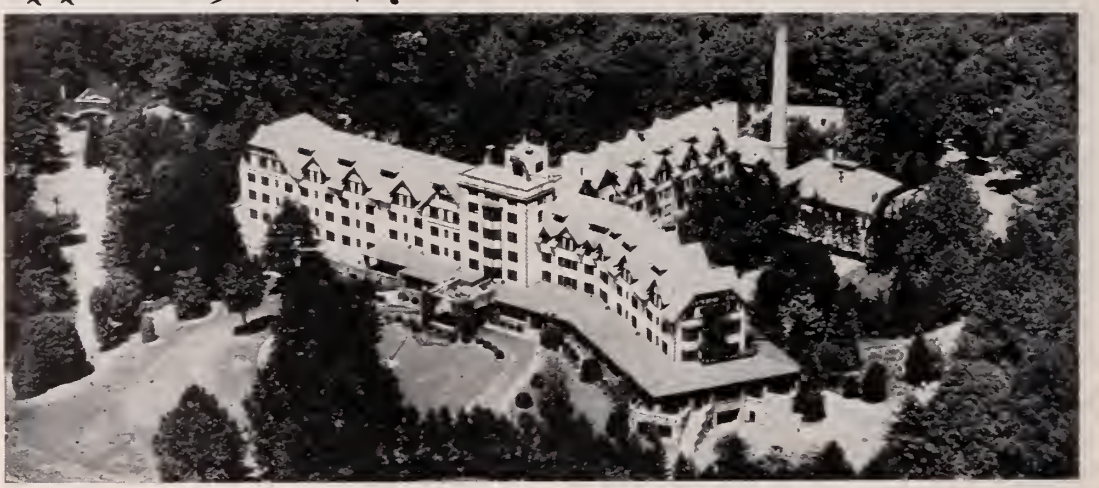
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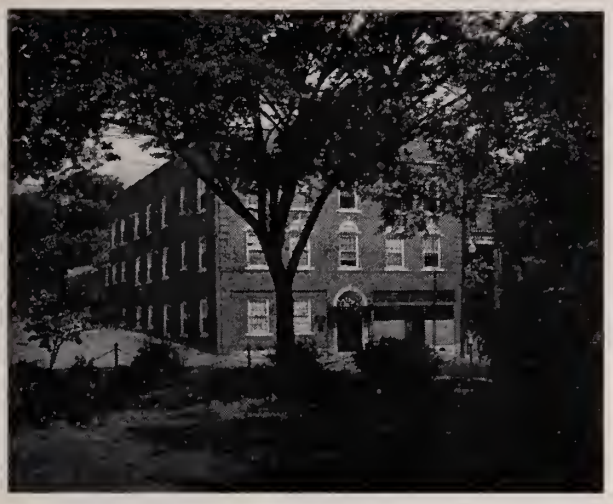
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The State Board of Medical Examiners of Virginia

The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, December 4, 1957. The examinations will be held in the same hotel December 5, 6, and 7, 1957, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before Nov. 12, 1957. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S.W., Roanoke, Virginia.

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ACHROMYCIN® Tetracycline	125 mg.
Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Bottle of 24 tablets

syrup

Each teaspoonful (5 cc.) contains:

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Phenacetin	120 mg.
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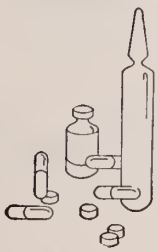


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Liberal protein intake is considered to be of therapeutic value in a wide variety of pathologic conditions.[1] Advances in the understanding of protein metabolism indicate that dietary protein should provide amino acids in proportions paralleling physiologic needs.[2, 3] In experimental studies with animals, low protein diets supplying amino acids disproportionate to needs have been shown to effect physiologic harm by depressing growth, by inducing amino acid and B-vitamin deficiencies, and by causing deposition of fat in the liver.[4]

Hence not only the *amount* of protein but also its *quality* (in terms of its amino acid proportions) is important. It has been suggested[1] that for therapeutic purposes about two-thirds of the ingested protein come from foods of animal source, whose protein resembles human body protein in amino acid interrelationships. Depending on the needs of the patient, the therapeutic diet may supply 1.0 or more grams of protein per kilogram of body weight. Adequate caloric intake is required to protect the dietary protein from dissipation for energy purposes.

Meat, with its high content of top-quality protein, holds a prominent place among foods which supply this essential for establishing satisfactory levels of amino acids in physiologic proportions. It also contributes valuable amounts of B vitamins and essential minerals—nutrients which play a basic role in intermediate metabolism.

1. Proudfit, P. T., and Robinson, C. H.: Nutrition and Diet Therapy, ed. 11, New York, The Macmillan Company, 1955, pp. 314-320.
2. Harper, A. E.: Amino Acid Imbalance, Toxicities and Antagonisms, Nutrition Rev. *14*:225 (Aug.) 1956.
3. Amino Acid Requirements of Adult Man, Nutrition Rev. *14*:232 (Aug.) 1956.
4. Amino Acid Imbalance and Supplementation, Editorial, J.A.M.A. *161*:884 (June 30) 1956. Council on Foods and Nutrition, American Medical Association: Importance of Amino Acid Balance in Nutrition, J.A.M.A. *158*:655 (June 25) 1955.

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

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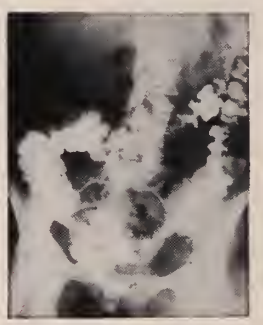
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when anxiety and tension "erupts" in the G. I. tract...

in spastic and irritable colon



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Combines Meprobamate (*400 mg.*) the most widely prescribed tranquilizer... helps control the "emotional overlay" of spastic and irritable colon—without fear of barbiturate loginess, hangover or habituation... *with* PATHILON (*25 mg.*) the anticholinergic noted for its extremely low toxicity and high effectiveness in the treatment of many G.I. disorders.

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with choline, methionine, pyridoxine (B_6) and other lipotropics



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UNSATURATED FATTY ACIDS**	378 mg.
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dl, METHIONINE	110 mg.
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**from specially refined safflower seed oil. Provides approximately 294 mg. of linoleic acid.

dosage: Therapeutic dose, 6 to 9 capsules, in divided doses with meals, or more as needed. Maintenance dose, one LUFA capsule t.i.d. with meals.

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Samples, literature and diet charts for patients on request.

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A Dependable Antihypertensive

"...by far the most effective

and useful orally administered agent for reducing blood pressure . . . fully worthy of a trial in every case of essential hypertension in which treatment is thought necessary. The severe cases, which always need treatment, are as likely to respond as the mild."[1]

1. Locket, S.: Brit. M.J. *1*:809 (Apr. 2) 1955.

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2. Wright, W.T., Jr., et al.: J. Kansas M. Soc. *57*:410 (July) 1956.

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A logical first step when more potent drugs are needed

Rauwiloid is recognized as basal medication in all grades and types of hypertension. In combination with more potent agents it proves synergistic or potentiating, making smaller dosage effective and freer from side actions.

Rauwiloid® + Veriloid®

In moderate to severe hypertension this single-tablet combination permits long-term therapy with dependably stable response. Each tablet contains 1 mg. Rauwiloid (alseroxylon) and 3 mg. Veriloid (alkavervir). Initial dose, 1 tablet t.i.d., p.c.

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Infant Carbohydrate Metabolism

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The breast-fed infant receives about 12 gms. of carbohydrate per kilo body weight, while the artificially fed infant receives about 8 to 14 gms. per kilo. In the choice of an added carbohydrate, we must consider adaptability, tolerance, digestability, absorption, fermentability, and irritation to the intestines.

The same problems of infant feeding recur from generation to generation, but solutions may differ with each era. The carbohydrate requirement for all infants is as completely fulfilled by KARO® Syrup today as a generation ago. Whatever the type of milk adapted to the individual infant, KARO Syrup may be added confidently because it is a balanced mixture of low-molecular weight sugars, readily miscible, well tolerated, palliative, hypoallergenic, resistant to fermentation in the intestine, easily digestible, readily absorbed and non-laxative. It is readily available in all food stores.

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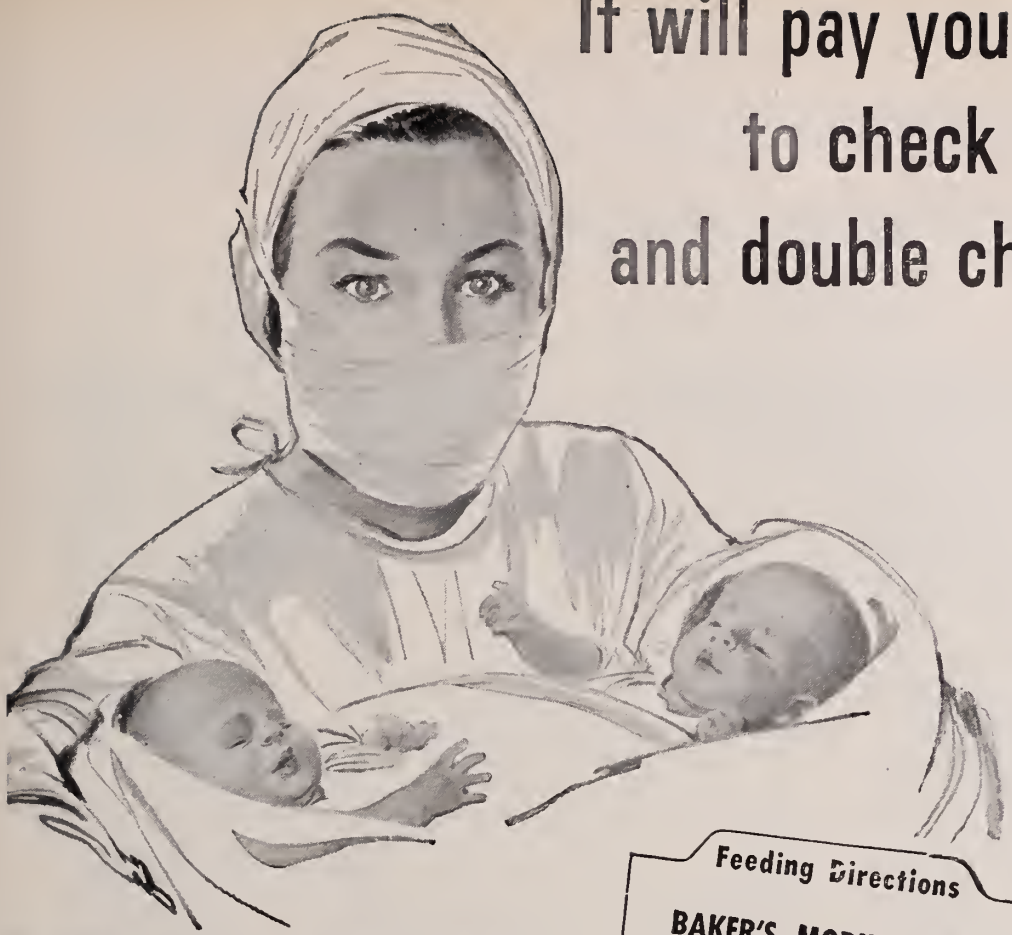
INFANTS' CALORIC REQUIREMENTS

AGE (Months)	CALS. Per 24 hrs.	CALS. Per Kilo	CALS. Per Pound
1	500	115	52
2	625		
3	675		
4	725	110	50
5	750		
6	800		
7	825	100	45
8	850		
9	875		
10	900	95	43
11	950		
12	1000		
24	1200	90	40



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Check these facts!

Baker's Modified Milk is a *complete* infant food — contains *all* requirements for complete infant nutrition . . . It is available in two time-saving forms — easy-to-prepare *Baker's Liquid* and *Baker's Powder,* the latter particularly adaptable for prematures and for complemental and supplemental feedings. Both forms are low in cost — less than a penny per ounce of formula.

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NEWBORN INFANTS (Hospital)—1 part Baker's to 2 parts cool water.

FIRST WEEK AT HOME — 1 part Baker's to 1½ parts cool water.

AFTER FIRST WEEK AT HOME — 1 part Baker's to 1 part cool water.

Double Check the results you get!

In the hospital — and at home.



Liquid Powder

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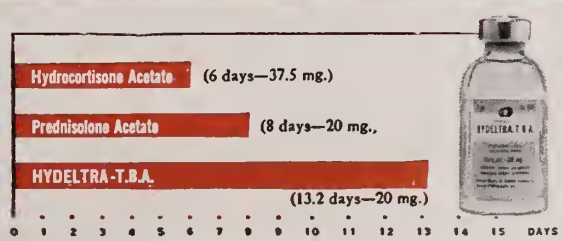
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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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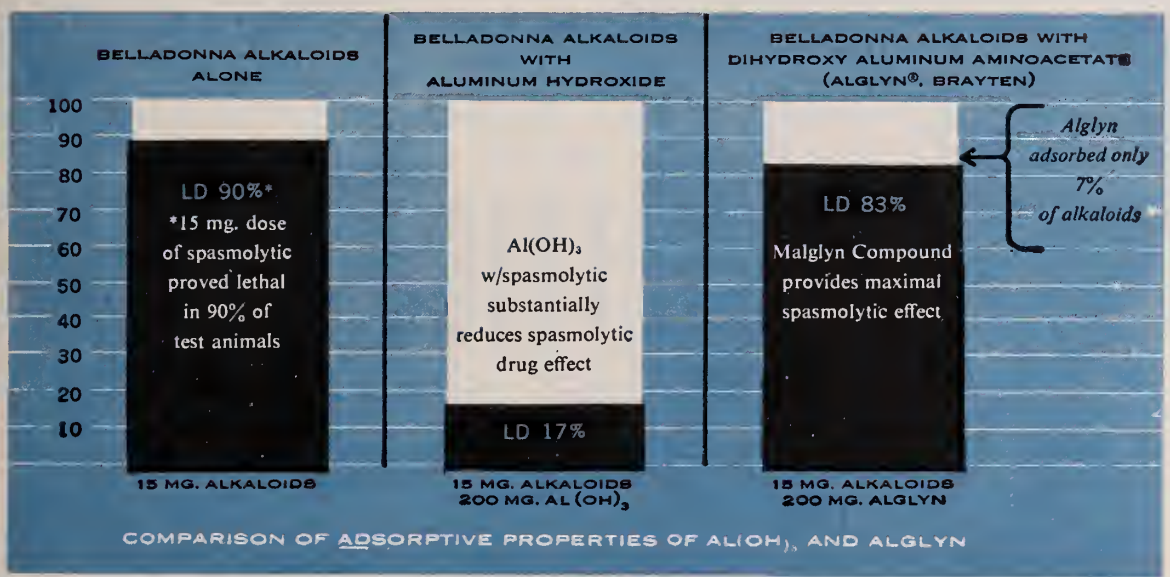
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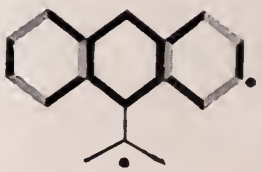
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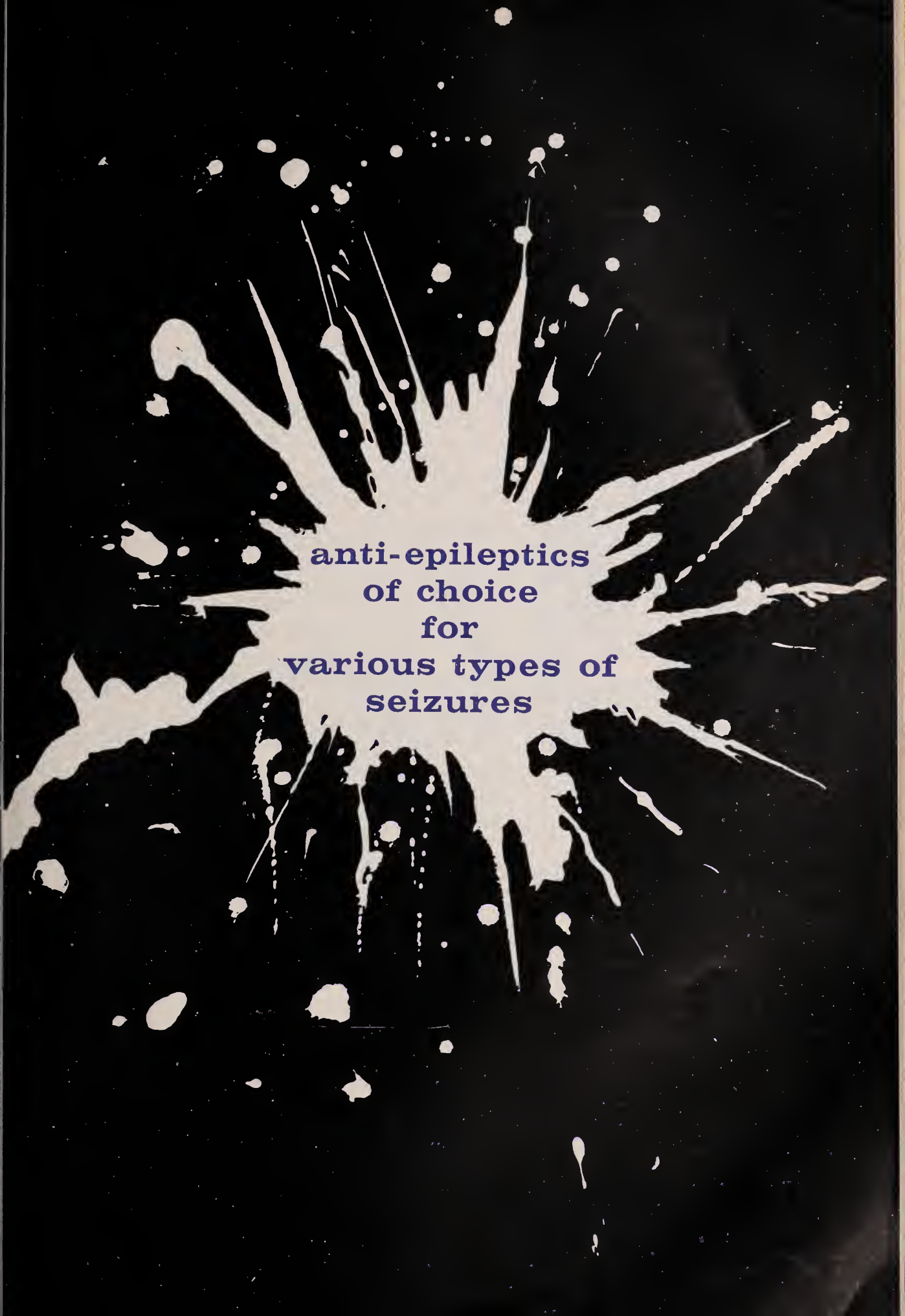
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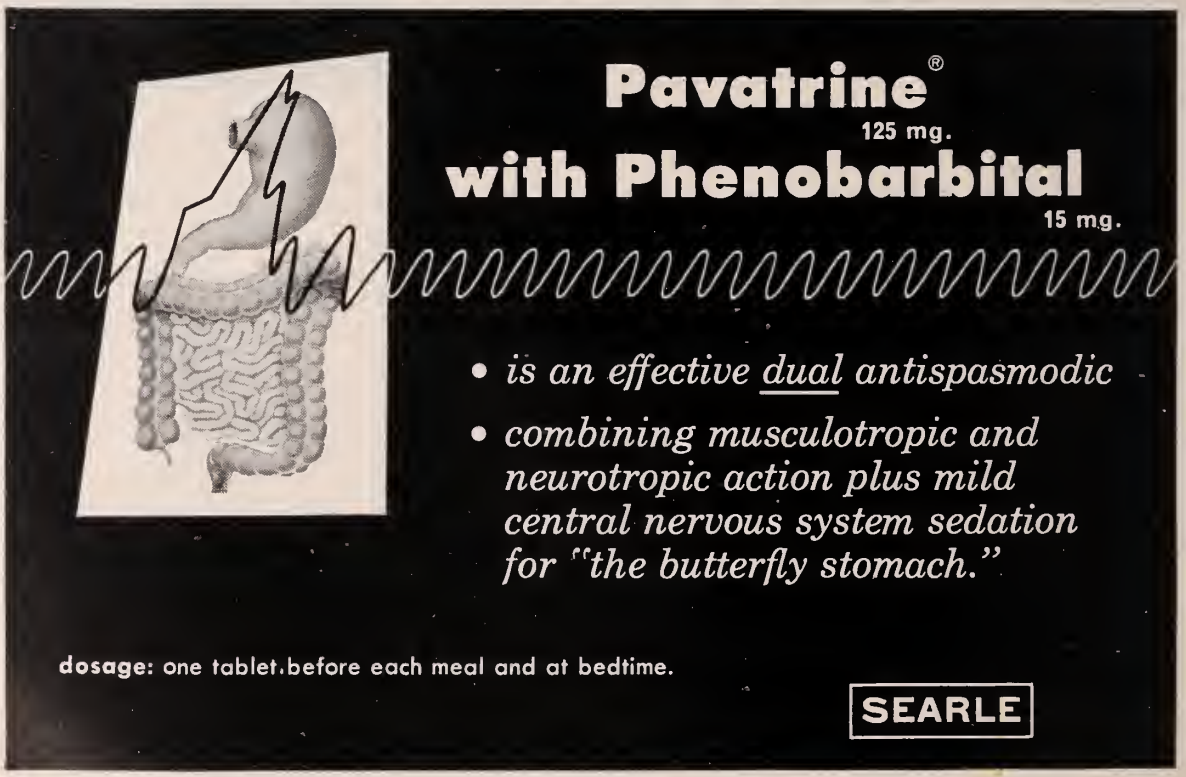
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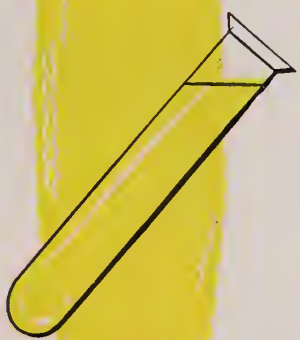
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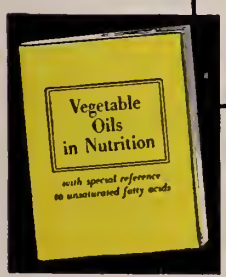
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	Saturated		Oleic		Linoleic		Linolenic		Arachidonic		
	Ave.	Range	Ave.	Range	Ave.	Range	Ave.	Range	Ave.	Average	Range
Butter	—	46-48	—	—	4.0	—	1.2	—	0.2	—	26-42
Coconut oil	—	75-88	—	5-8	—	1.0-2.5	—	—	—	—	7-10
Corn oil	13	11-15	—	23-40	56	46-66	—	0.0-0.6	—	126	113-131
Cottonseed oil	26	21-30	27	22-36	47	34-57	—	—	—	105	90-117
Lard	43	—	46	—	10	15.6	0.5	—	0.5 (2.1)	—	53-77
Linseed oil	—	6-12	—	13-31	—	10-27	—	30-64	—	—	170-204
Margorine	23	15-23	62	59-77	5.8	5-11	—	0.1-0.9	0	81	74-85
Olive oil	—	8-16	—	53-86	—	4-20	—	—	—	—	80-88
Peanut oil	17	14-22	54	44-65	29	20-37	—	—	—	98	90-102
Shortening	25	17-45	62	43-79	5	3-12	—	0.2-0.6	0-0.5	78	59-80
Soybean oil	15	11-18	25	18-58	55	28-62	5.1	0.3-10	—	130	100-143
Tollow (beef)	53	—	42	—	4	5.3	0.5	—	0.5	—	40-48

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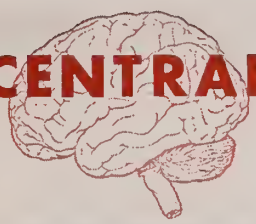
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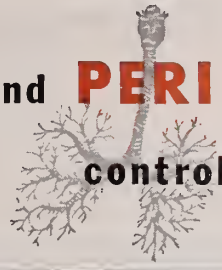
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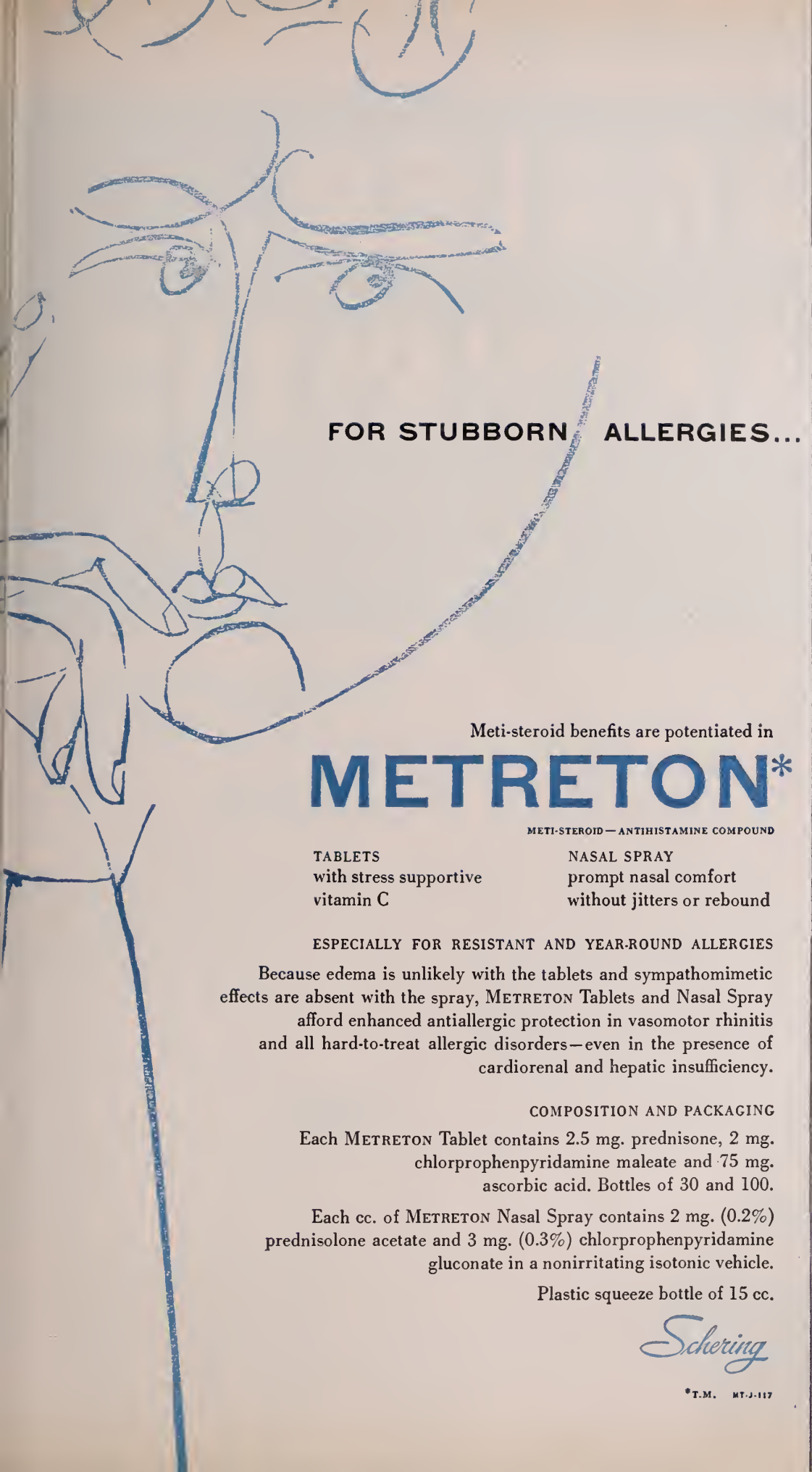
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with stress supportive vitamin C	prompt nasal comfort without jitters or rebound

ESPECIALLY FOR RESISTANT AND YEAR-ROUND ALLERGIES

Because edema is unlikely with the tablets and sympathomimetic effects are absent with the spray, METRETON Tablets and Nasal Spray afford enhanced antiallergic protection in vasomotor rhinitis and all hard-to-treat allergic disorders—even in the presence of cardiorenal and hepatic insufficiency.

COMPOSITION AND PACKAGING

Each METRETON Tablet contains 2.5 mg. prednisone, 2 mg. chlorprophenpyridamine maleate and 75 mg. ascorbic acid. Bottles of 30 and 100.

Each cc. of METRETON Nasal Spray contains 2 mg. (0.2%) prednisolone acetate and 3 mg. (0.3%) chlorprophenpyridamine gluconate in a nonirritating isotonic vehicle.

Plastic squeeze bottle of 15 cc.

Schering

*T.M. MT-J-117

New Chemotherapy

ARALEN® *in* RHEUMATOID ARTHRITIS

Extensive studies of rheumatoid arthritis and related collagen diseases—in this country and abroad—have shown the antimalarial Aralen phosphate to be highly effective and well tolerated in a large percentage of patients.

Clinical Results with Aralen in Rheumatoid Arthritis

Author	No. of Cases	Major Improvement	Minor Improvement	No Effect
Haydu[1]	28	22	5	1
Rinehart[2]	25	12	4	9
Freedman[3]	50	43	3	4
Bagnall[4]	108	77	12	19
Bruckner[5]	36	32	0	4
Cohen and Calkins[6]	22	17	3	2
Scherbel et al.[7]	25	9	8	8
Total	294	212 (72%)	35 (12%)	47 (16%)

- Success dependent upon persistent treatment
- Often of benefit where other agents have failed
- Remissions on therapy well maintained
- Remission of 3 to 12 months possible even if treatment is interrupted
- Tachyphylaxis not evident

GENERAL EFFECTS:

- Patient feels better
- Patient looks better
- Exercise tolerance increases
- Walking speed and hand grip improves

LABORATORY EFFECTS:

- E. S. R. may fall slowly
- Hemoglobin level may gradually rise

ANALGESICS AND STEROIDS:

- Requirements usually reduced or eliminated

JOINT EFFECTS:

- Pain and tenderness relieved
- Mobility increases
- Swellings diminish or disappear
- Muscle strength improves
- Rheumatic nodules may disappear
- Even severe or advanced deformity may improve
- *Active* inflammatory process usually subsides
- Joint effusion may diminish

DOSAGE:

Aralen is cumulative in action and requires four to twelve weeks of administration before therapeutic effect become apparent.

Latest information indicates that an initial dose of 250 mg. of Aralen phosphate is preferable to the higher doses sometimes recommended. However If side effects appear, withdraw Aralen for several days until they subside. Reinstate treatment with 125 mg. daily and, if well tolerated, increase to 250 mg. The usual maintenance dose is 250 mg. daily.

New Chemotherapy

INDICATIONS:

- Rheumatoid arthritis, acute or chronic —with or without adjunctive therapy.
- Spondylitis
- Arthritis associated with lupus erythematosus or psoriasis

THEORY OF ACTION:

Aralen appears to suppress or induce remission of rheumatoid inflammatory processes by inhibiting adenosinetriphosphatase.

HOW SUPPLIED:

Aralen phosphate: 250 mg. tablets in bottles of 100 and 1000.
125 mg. tablets in bottles of 100.

Tolerance:

Aralen is usually well tolerated. Toxic effects are usually mild and to date have been transitory in nature, disappearing completely either on continuance or cessation of therapy or on reduction in dosage.

Gastrointestinal disturbances (e.g. nausea, rarely vomiting, diarrhea, abdominal cramps, anorexia) are frequent manifestations of intolerance. Temporary blurring of vision (due to interference with accommodation) is also relatively frequent.

Pleomorphic skin eruptions (e.g. lichenoid, maculopapular, purpuric), although generally mild, may preclude the use of an optimum dosage schedule. If a skin reaction persists on a reduced dosage schedule, or recurs after reinstitution of treatment with gradually increasing doses, discontinue Aralen till the lesion again disappears and consider resuming treatment with Plaquenil® (brand of hydroxychloroquine).

Less frequently transitory vertigo, headache, lassitude, or neurological disturbances, such as nervousness, irritability, emotional change, and nightmares have been reported. Instances of unexplained slight gradual weight loss as the patient's general health and arthritic condition improved have been mentioned. Occasional instances of bleaching (depigmentation) of the hair have been described.

Although an occasional instance of leukopenia, with normal differential count, has been reported (WBC about 3000), it has not proved troublesome because it has always been reversible on discontinuance, or diminution of the dose. Even spontaneous reversal may occur while full dosage is maintained.

Caution:

Aralen is known to concentrate in the liver and, although hepatic damage has never been reported, the drug should be used with caution in the presence of liver disease. In the presence of severe gastrointestinal, neurological, or blood disorders, the drug should be used with caution or not at all. If such disorders occur during the course of therapy, the drug should be discontinued. Concomitant use of gold or phenylbutazone with Aralen should be avoided because of the tendency of these agents to produce drug dermatitis.

Clinical Comments:

Of fifty patients receiving Aralen therapy, "43 have become really well; that is, they have no stiffness, and any pain that occurs can reasonably be attributed to use of joints affected by secondary degenerative changes. They have no evidence of joint inflammation, but may have a raised erythrocyte sedimentation rate. They have little or no need for analgesics." *Freedman*[3]

"One hundred and twenty-five private patients have been carefully followed clinically and haematologically while receiving well over 200 patient-years of chloroquine [Aralen] therapy. The results are considered good in 70%, one-half of these cases being in remission. Improved work performance, sedimentation rate, and hemoglobin levels paralleled the major objective gain in this 70%. 90% of them remained on chloroquine [Aralen] therapy, half for more than two years. Classical peripheral rheumatoid arthritis, spondylitis, arthritis of juvenile onset, and rheumatoid disease with psoriasis, all appeared to respond about equally well.

"It is suggested that chloroquine comes closer to the ideal for long-term, safe, control of rheumatoid disease than any other agent now available." *Bagnall*[4]

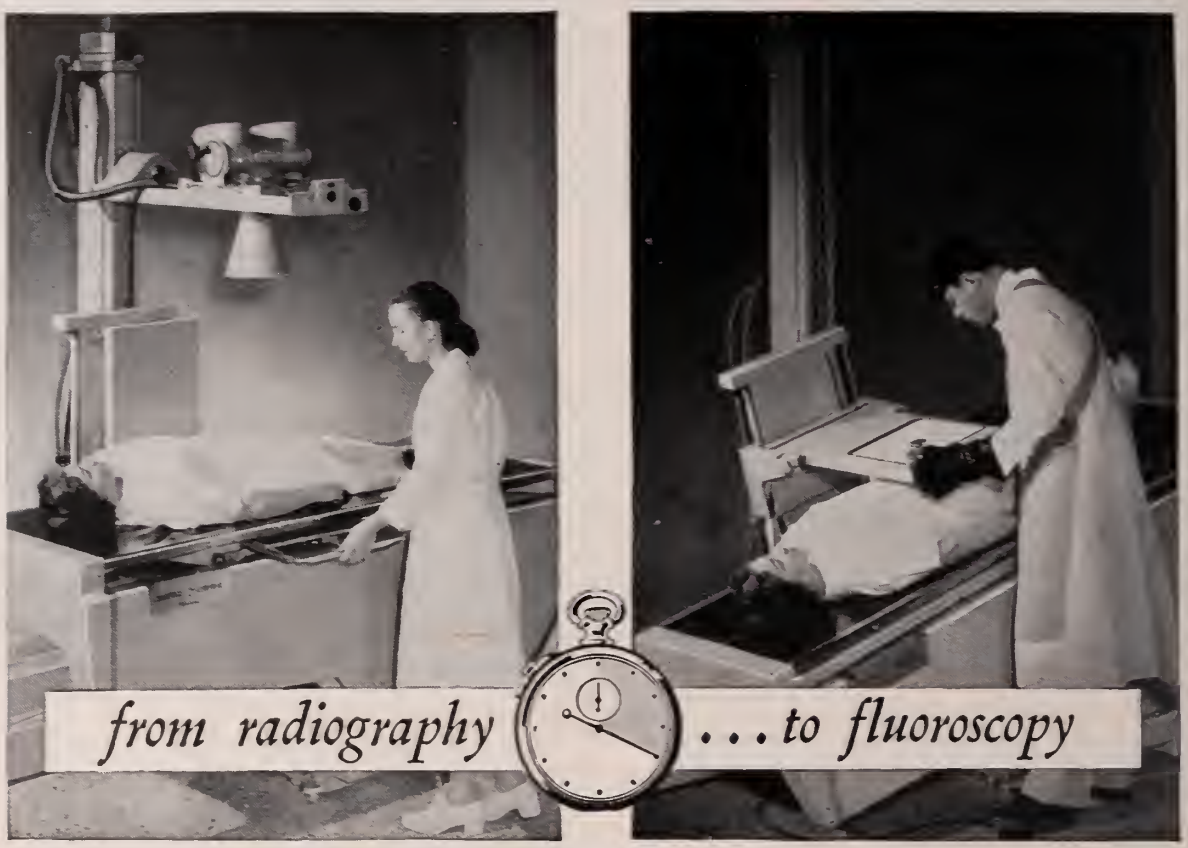
"Out of the 36 rheumatoid arthritis cases we treated . . . favorable results were obtained in 32 cases. *Bruckner et al.*[5]

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2. Rinehart, R.E.: Chloroquine therapy in rheumatoid arthritis, *Northwest Med.* 54:713, July, 1955.
3. Freedman, A.: Chloroquine and rheumatoid arthritis, a short-term controlled trial, *Ann. Rheum. Dis.* 15:251, Sept., 1956.
4. Bagnall, A.W.: The value of chloroquine in rheumatoid disease, a four year study of continuous therapy, read at the Ninth International Congress on Rheumatic Diseases in Toronto, Canada, June 23-28, 1957.
5. Bruckner I., and Rosenzweig, S.: Treatment of chronic rheumatoid arthritis with synthetic antimalarials, read at the Ninth International Congress on Rheumatic Diseases in Toronto, Canada, June 23-28, 1957.
6. Cohen, A.S., and Calkins, Evan: A controlled study of chloroquine as an antirheumatic agent, read at the Ninth International Congress on Rheumatic Diseases in Toronto, Canada, June 23-28, 1957.
7. Scherbel, A. L., Schuchter, S.L., and Harrison, J.W.: Comparison of effects of two antimalarial agents, hydroxychloroquine sulfate and chloroquine phosphate, in patients with rheumatoid arthritis, *Cleveland Clin. Quart.* 24:98, April, 1957.

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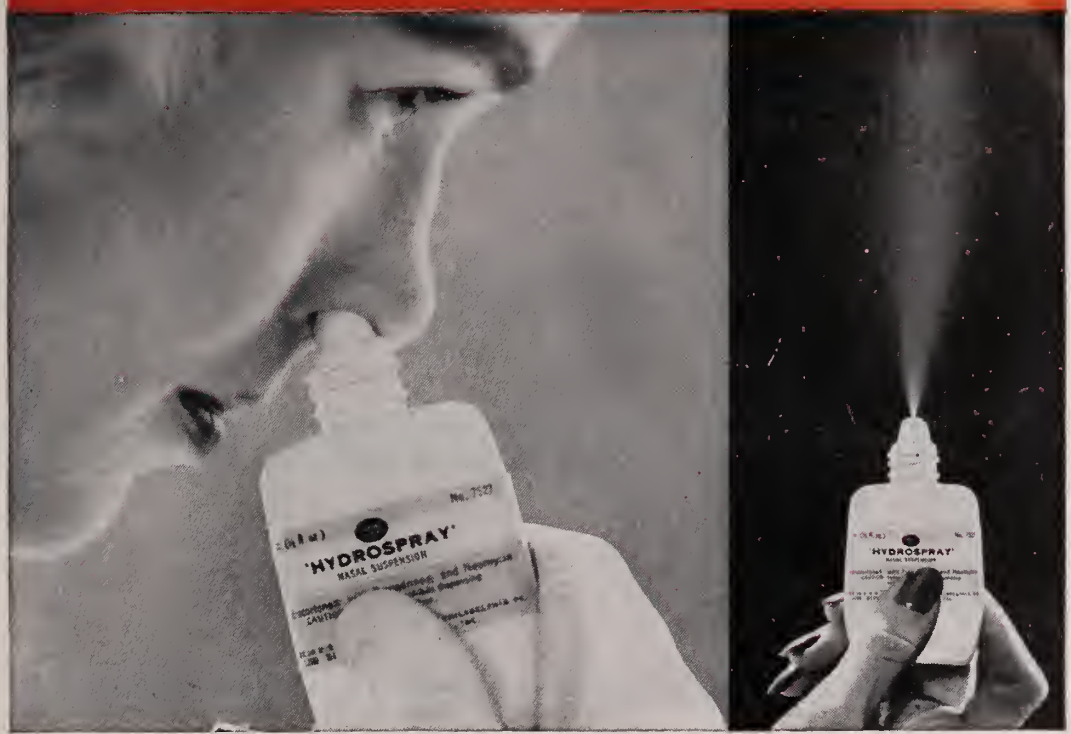
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Topically applied hydrocortisone[1] in therapeutic concentrations has been shown to afford a significant degree of subjective and objective improvement in a high percentage of patients suffering from various types of rhinitis. HYDROSPRAY provides HYDROCORTONE in a concentration of 0.1% plus a safe but potent decongestant, PROPADRINE, and a wide-spectrum antibiotic, Neomycin, with low sensitization potential. This combination provides a three-fold attack on the physiologic and pathologic manifestations of nasal allergies which results in a degree of relief that is often greater and achieved faster than when any one of these agents is employed alone.
INDICATIONS: Acute and chronic rhinitis, vasomotor rhinitis, perennial rhinitis and polyposis.

SUPPLIED: In squeezable plastic spray bottles containing 15 cc. HYDROSPRAY, each cc. supplying 1 mg. of HYDROCORTONE, 15 mg. of PROPADRINE Hydrochloride and 5 mg. of Neomycin Sulfate (equivalent to 8.5 mg. of neomycin base).

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REFERENCE: 1. Silcox, L. E., *A.M.A. Arch. Otolaryng.* 60:431, Oct. 1954.

"the value of analgesic and tranquilizing agents should be clearly recognized in the management of [angina]..."[1]

new for angina

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CARTRAX*

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In pain. Anxious. Fearful. On the road to cardiac invalidism. These are the pathways of angina patients. For fear and pain are inextricably linked in the angina syndrome.

For angina patients—perhaps the next one who enters your office—won't you consider new CARTRAX? This doubly effective therapy combines PETN (pentaerythritol tetranitrate) for lasting vasodilation and ATARAX for peace of mind. Thus CARTRAX relieves not only the anginal pain but reduces the concomitant anxiety.

Dosage and supplied: begin with 1 to 2 yellow tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. This may be increased for maximal effect by switching to *pink* tablets (20 mg. PETN plus 10 mg. ATARAX). In bottles of 100.

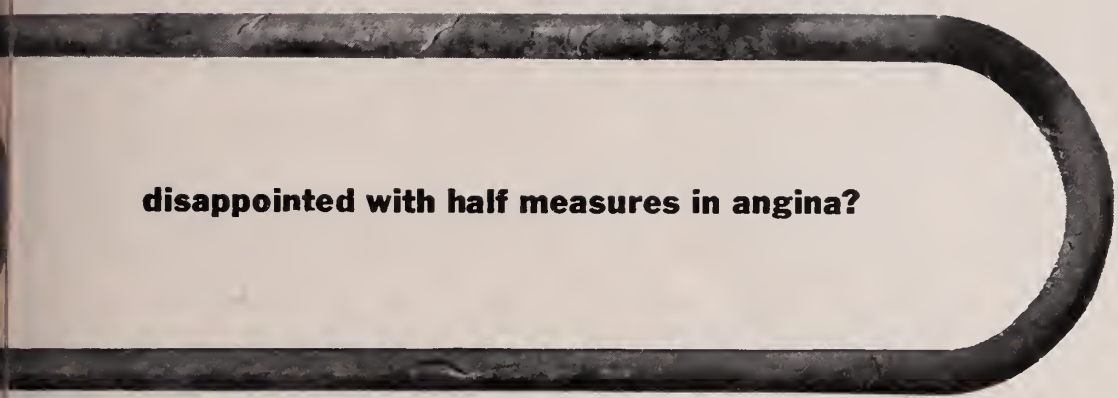
CARTRAX should be taken *before* meals, on a *continuous* dosage schedule. Use with caution in glaucoma.

1. Russek, H. I.: J. Am. Geriat. Soc. *4*:877 (Sept.) 1956.

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Flu Fight

Drug Firms Speed U
Vaccine Output, But
Will the U.S. Need

Asiatic Virus Raises Thr
Government Buys, P
nd Hens Have to Hel

en Attack, Rapid Spr

8 STUDENTS ON FLIGHTS TO U. S. HAVE ASIAN FLU

New York, Aug. 15 (P Laboratory tests on e foreign exchange student arrived Aug. 8 show they victims of Asiatic flu, the health department repo today. The eight arrived plane from Europe.

Twenty-nine other stud suffering from influenza rived Tuesday from Rot dam on the ship Arosa Sky. One, Nicholas Memmos, a Greek exchange student, die yesterday. Six of these stu dents were released today the others are to be re tomorrow. It has not termined whether died from Asiatic

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THE INFLUE
How Deadly Will it B
What Can We Do abo

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Answe

A new —is show around th now have

ıe War on Mutant A

If Florence was in the grip of an epi-nic of colds, coughs and fevers, astrolo-s . . . declared that it was caused by influence of an unusual conjunction of nets. This sickness be known as "infl
—Chronicles of 1200-1470.

To combat new r ence," a worldwide s week in respons m the Far East. Si the World Health ra, which collects i m around the globe cimens of the ene ns. In more than a luding those of th

Asian Flu: the Outlook

Asian influenza will hit the U.S. this fall before mass immunization can be effective, and the nation faces an epidemic which may strike 15 million to 30 million people. The disease is relatively mild (in no way comparable to the killing "Spanish flu" of 1918-19), and is likely to cause only a small number of deaths among the feeble young and enfeebled old. But it may compel 10% to 20% of the population in affected areas to tak thus

W quie a co pect Ser rop

U.S. Fighting A

The War On Asiatic Flu

There's cause for concern about Asiatic flu, but scientists and public health officials see no reason for anyone to panic.

First shipments of the vaccine against the new influenza strain have arrived in Chicago, setting off a flood of telephone calls from worried patients to doctors, and from doctors to drug suppliers. This is a norm pattern of mass fear and is understan

The of the

Even though Salk vaccine priorities were necessary, the regulation produced administrative headaches, public complaints and probably a gray, if not a black market. When regulation i invoke it. would

PUBLIC HEALTH

Influenza M

➤ INFLUENZA, one of the most unp dictable of communicable diseases, is re ing "on cat feet" across the nation rig now. It has already struck once this ye in mild epidemic form at an Air For base in Colorado. When and how severe it will strike again is a perennial riddle public health authorities.

It will probably not lie dormant f the rest of the winter months. At the lea there will be sporadic outbu throughout the country. If ditions occur, it could sw

to counteract
complications from
"ORIENTAL FLU"

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Causing It?

CATCH "ASIATIC" FLU—
the New Virus Threat From Orient

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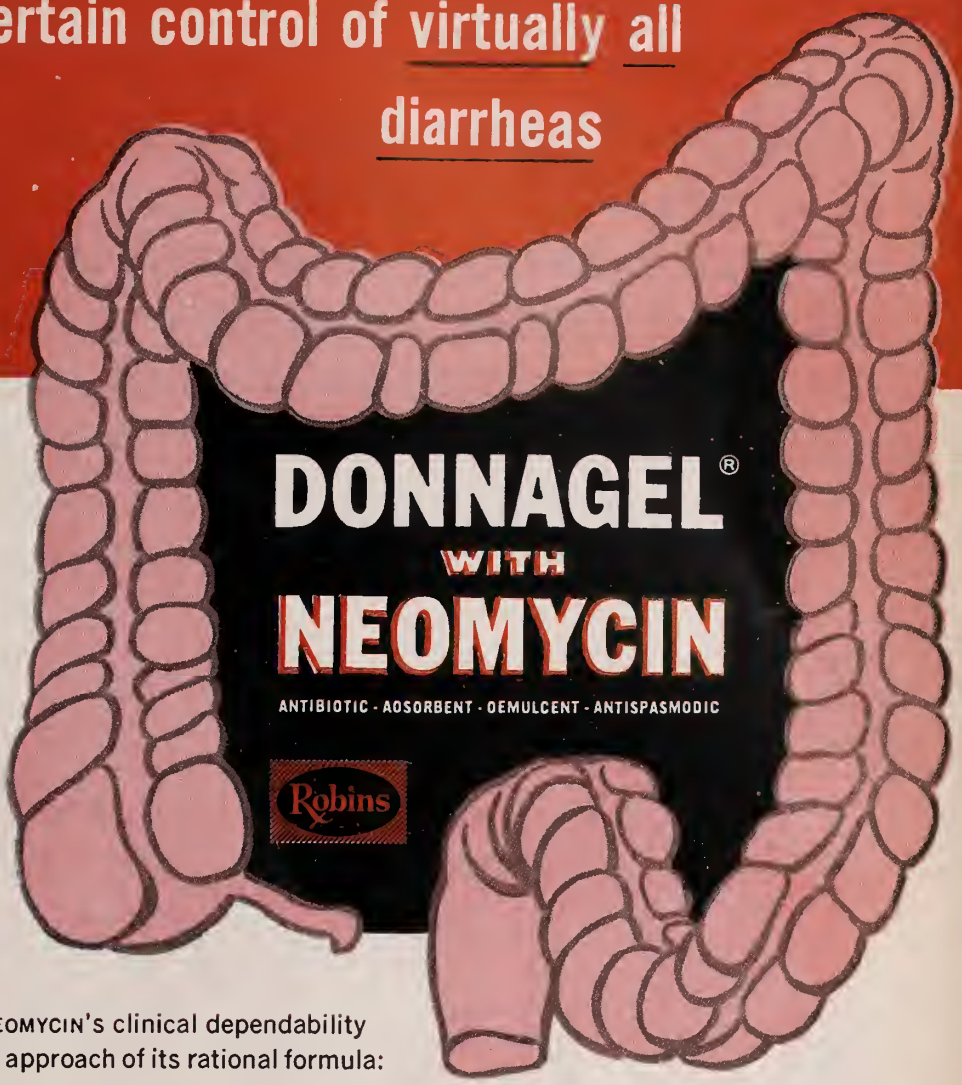
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ANNOUNCING: a NEW antidiarrheal for more certain control of virtually all diarrheas



Addition of neomycin to the effective DONNAGEL formula assures even more certain control of most of the common forms of diarrhea.

Neomycin is an ideal antibiotic for enteric use: it is effectively bacteriostatic against neomycin-susceptible pathogens; and it is relatively non-absorbable.

The secret of DONNAGEL WITH NEOMYCIN's clinical dependability lies in the comprehensive approach of its rational formula:

COMPONENT in each 30 cc. (1 fl. oz.)	ACTION	BENEFIT
Neomycin base, 210.0 mg. (as neomycin sulfate, 300 mg.)	antibiotic	Affords effective intestinal bacteriostasis.
Kaolin (6.0 Gm.)	adsorbent, demulcent	Binds toxic and irritating substances. Provides protective coating for irritated intestinal mucosa.
Pectin (142.8 mg.)	protective, demulcent	Supplements action of kaolin as an intestinal detoxifying and demulcent agent.
Dihydroxyaluminum aminoacetate (0.25 Gm.)	antacid, demulcent	Enhances demulcent and detoxifying action of the kaolin-pectin suspension.
Natural belladonna alkaloids: hyoscyamine sulfate (0.1037 mg.) atropine sulfate (0.0194 mg.) hyoscine hydrobromide (0.0065 mg.)	anti-spasmodic	Relieves intestinal hypermotility and hypertonicity.
Phenobarbital (¼ gr.)	sedative	Diminishes nervousness, stress and apprehension.

Robins

Informational literature available upon request.

INDICATIONS: DONNAGEL WITH NEOMYCIN is specifically indicated in diarrheas or dysentery caused by neomycin-susceptible organisms; in diarrheas not yet proven to be of bacterial origin, prior to definitive diagnosis. Also useful in enteritis, even though diarrhea may not be present.

SUPPLIED: Bottles of 6 fl. oz. At all prescription pharmacies.

DOSAGE: **Adults:** 1 to 2 tablespoonfuls (15 to 30 cc.) every 4 hours. **Children over 1 year:** 1 to 2 teaspoonfuls every 4 hours. **Children under 1 year:** ½ to 1 teaspoonful every 4 hours.

ALSO AVAILABLE: DONNAGEL, the original formula, for use when an antibiotic is not indicated.

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INTRAVENOUS Compatible with common IV fluids. Stable for 24 hours in solution at room temperature. Average IV dose is 500 mg. given at 12 hour intervals. Vials of 100 mg., 250 mg., 500 mg.



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without depression, drowsiness, motor incoordination

"The most striking feature is that this drug does not act as a hypnotic...."[1] "No toxic side-effects were noted, with particular attention being paid to the hematopoietic system."[2]

dosage: *Children:* 150 mg. (½ tablet) three or four times daily. *Adults:* 150-300 mg. (½ to 1 tablet) three or four times daily.

supplied: 300 mg. scored tablets, bottles of 48 and 500.

(1) Asung, C. L.; Charcowa, A. I., and Villa, A. P.: Sea View Hosp. Bull. *16*:80, 1956. (2) Asung, C. L.; Charcowa, A. I., and Villa, A. P.: New York J. Med. *57*:1911 (June 1) 1957. (3) Report on Field Screening of Nostyn by 99 Physicians in 1,000 Patients, June, 1956.

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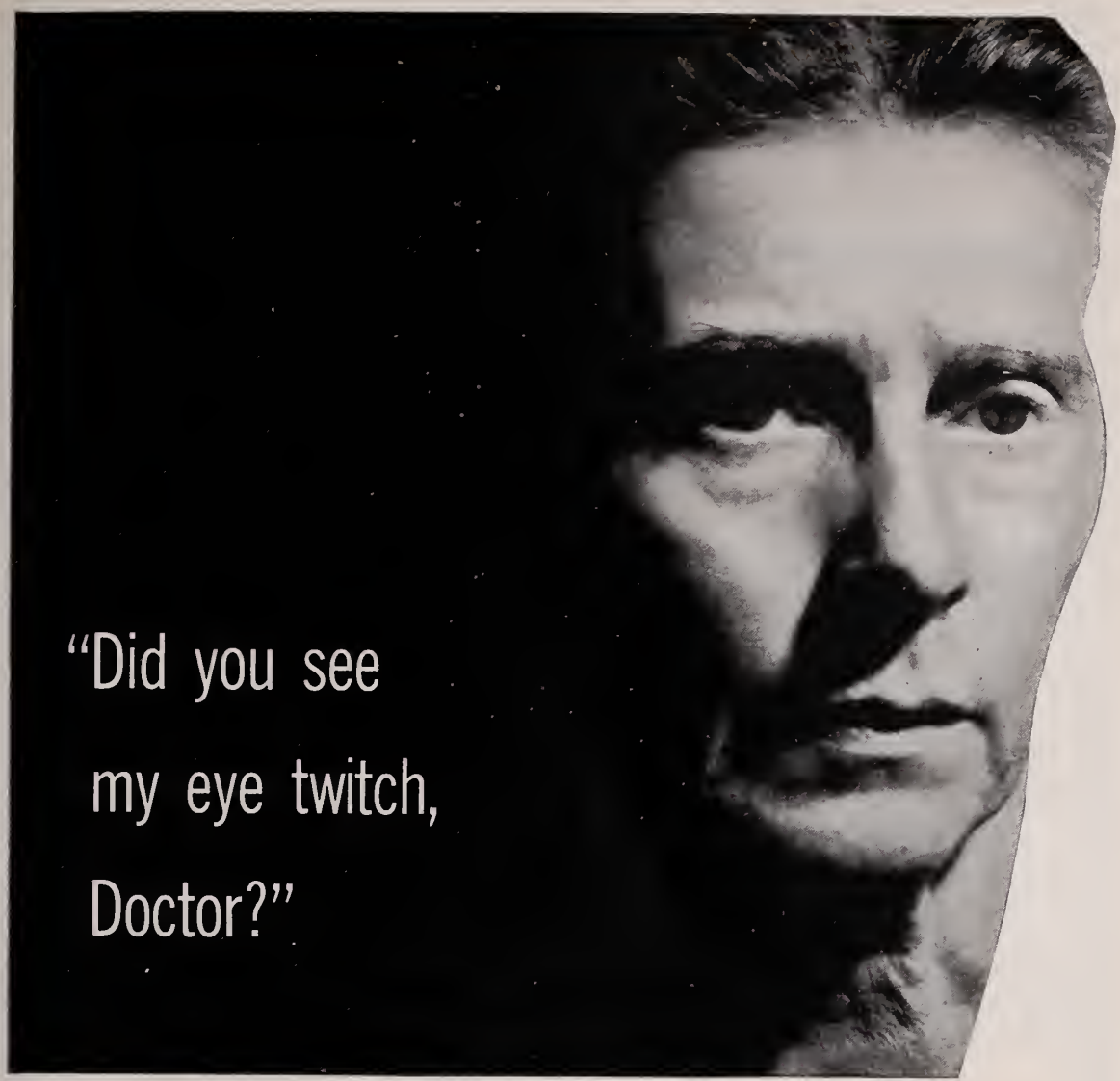
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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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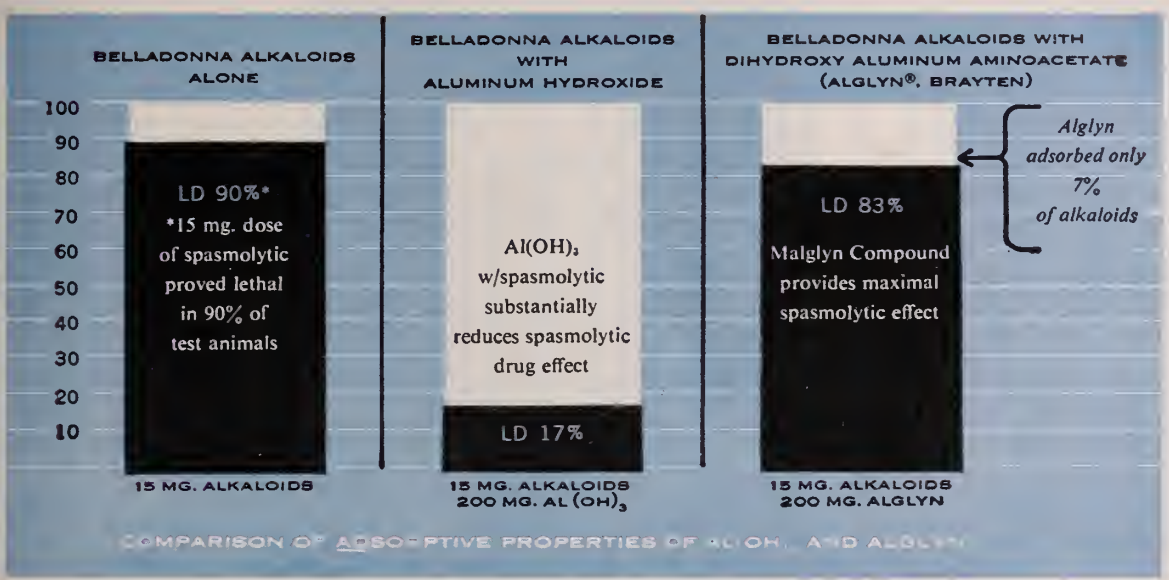
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The above laboratory study clearly indicates that the antacid ALGLYN, contained in the MALGLYN formula, does not materially interfere with the therapeutic effectiveness of its contained belladonna alkaloids. On the other hand, the marked *ad*sorptive properties of aluminum hydroxide renders its combination with belladonna alkaloids both uneconomical and therapeutically unreliable.

For both rapid and prolonged antacid effect, with consistently effective spasmolytic and sedative action, rely upon MALGLYN for treatment of peptic ulcer and epigastric distress.

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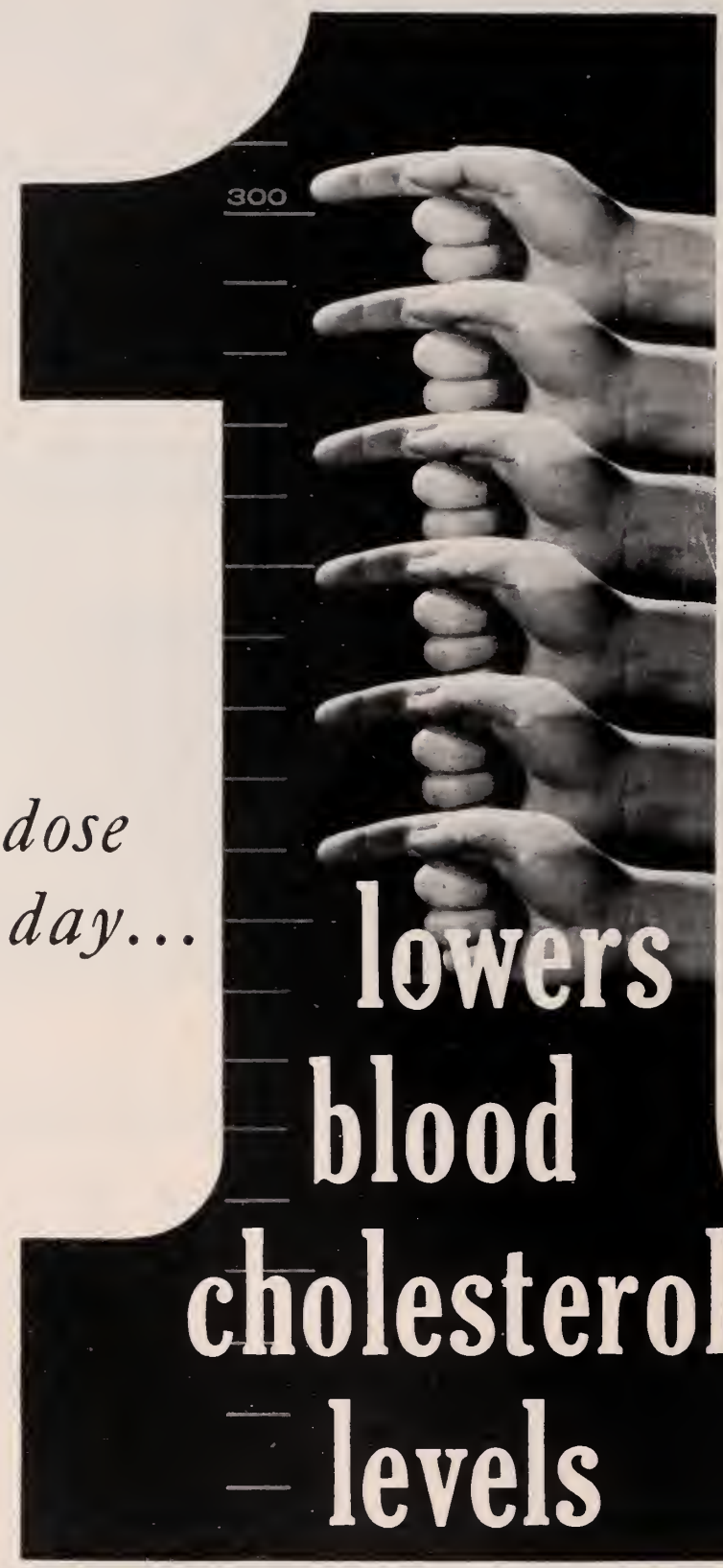
dihydroxy aluminum aminoacetate, N.N.R.	0.5 GM.
belladonna alkaloids (as sulfates)	0.162 MG.
phenobarbital	16.2 MG.

Also supplied: ALGLYN® (dihydroxy aluminum aminoacetate, N.N.R. 0.5 Gm per tablet). BELGLYN® (dihydroxy aluminum aminoacetate, N.N.R., 0.5 Gm. and belladonna alkaloids, 0.162 mg. per tablet).

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Just one dose a day effectively lowers elevated blood cholesterol

. . . while allowing the patient to eat a balanced . . . nutritious . . . and palatable diet

Each tablespoonful of emulsion contains:

Linoleic acid	6.8 Gm.
Vitamin B_6	0.6 mg.
Mixed tocopherols (Vitamin E)	11.5 mg.

(sodium benzoate as preservative)

Arcofac is effective in small doses and is reasonable in cost to the patient



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treptococcal pharyngitis
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racheobronchitis
acterial pneumonia due to resistant pneumococci, staphylococci, or mixed flora
iral or nonspecific pneumonia not responsive to other therapy
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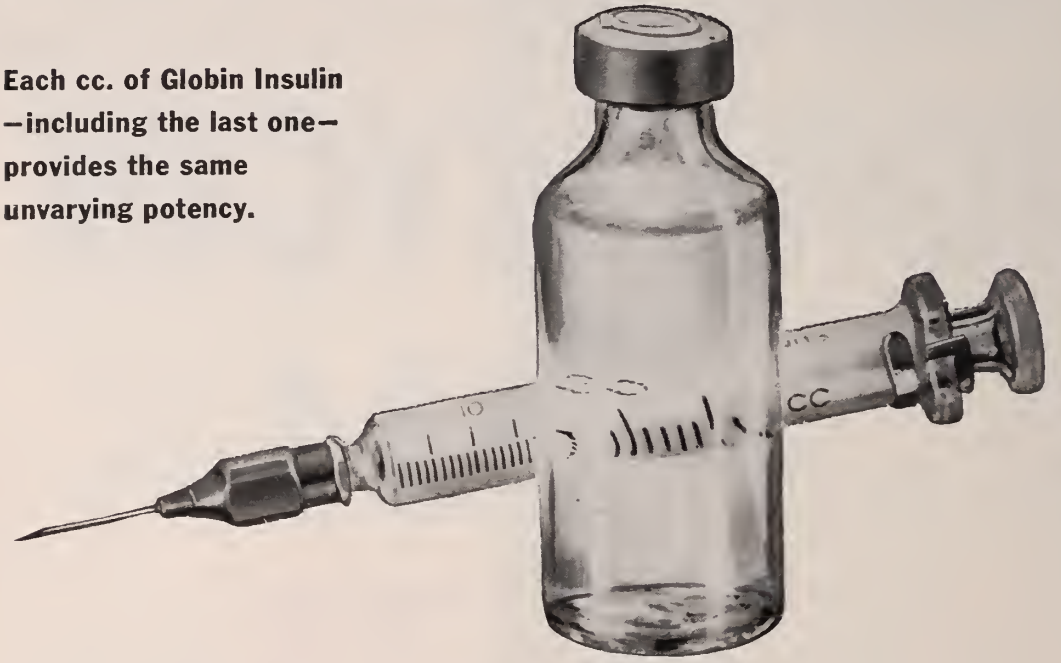
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Guest Editorial . . . .

The Roentgen Diagnosis of Pyloric Stenosis

SUPERFICIALLY, it would seem that the subject of pyloric stenosis has been worked to death, and that nothing new could be added. Yet, month after month, perfectly normal infants are sent to The Children's Hospital of Philadelphia with an x-ray diagnosis of pyloric stenosis.

Most of these cases have been diagnosed on the basis of gastric retention. But what is the normal gastric emptying time in a baby? We have learned, as have others before us, that a normal baby left in the supine position may keep a contrast medium in the fundus of the stomach for many hours. If the baby is turned over onto his abdomen, with the right side down, the contrast medium passes out of the stomach rapidly. We believe that putting a baby on his back after eating is the most frequent cause of the regurgitating healthy baby which so often is brought to the pediatrician by a distraught mother. The procedure of turning the baby over onto his abdomen after feeding, and propping the left side up slightly allows the formula to pass into the antrum of the stomach, and the air, which is always present, rises to the fundus and can be regurgitated without bringing up formula. This procedure is not new to radiologists, who see it happen with every gastrointestinal examination, but it is new to many doctors and to most mothers. By preaching this observation to our own immediate group of referring pediatricians, we have been successful in eliminating numerous unnecessary gastrointestinal examinations. This is most important if we are to prevent unnecessary radiation to infants and children.

If gastric retention cannot be relied upon, how does one make the diagnosis of pyloric stenosis? At The Children's Hospital of Philadelphia, surgery is undertaken when the peristaltic waves are seen and the tumor is palpated. Under these circumstances, a roentgen examination is not necessary and the baby escapes the roentgen exposure. A radiologic study is carried out only when the tumor cannot be palpated.

A supine survey film of the abdomen is first taken and studied by the radiologist. If there is any suspicion of intestinal obstruction, as there will be occasionally, an erect film is obtained. If there is a complete obstruction of the duodenum or small bowel demonstrated by air, no further examination is necessary and the baby is operated upon. If the plain films are negative, the contrast study is initiated.

A most important point in studying a suspected pyloric stenosis is that the stomach be deflated and clean prior to giving the barium. If the plain film shows a large air-filled stomach, a soft red rubber #8 catheter is passed, and the air and fluid aspirated.

There are two methods of introducing the barium. One method is to introduce it by catheter, and the other is to have the baby swallow it. We prefer the latter method. We know we have found enough abnormalities of the esophagus to warrant this method

of examination. Some radiologists study the stomach and duodenum by introducing the barium by catheter and then, upon completion of the study, have the baby swallow some barium to visualize the esophagus. It is our opinion that often, once the stomach has some contrast media within it, the baby is satisfied and rather reluctant to swallow any more. For this reason we initiate the entire procedure by having the baby swallow. This is done in the supine position. Once the esophagus and the esophago-gastric junction have been checked out, the baby is turned over onto the abdomen with the right side down. At this time a very important point must be kept in mind. These are hungry babies and many have a tendency to want to eat a considerable quantity of the contrast medium. If the stomach is over-distended, the study is often doomed to failure. For this reason we stop at 2 ozs. and substitute a pacifier (nipple with cotton soaked in glucose water). This tends to keep the stomach active, and also has the advantage of calming the nerves of the examiner.

Now with the baby lying on the abdomen with the right side down, the peristaltic waves are watched. These violent waves come right down to the pylorus and nothing happens. No barium is seen to pass beyond the antrum. After about six waves have been observed passing to the pylorus, a series of four "spot" exposures are made (single 8 x 10 film with four "spots"). When this film is developed, usually the "string sign" is present even on this first set of films. One's fluoroscopic vision may not see the "string sign", but it is present on the photographic emulsion.

If the "string sign" is present, the examination is finished. There are times when a second set of "spot films" is necessary. Almost always enough peristaltic activity has taken place by this time to allow the "string sign" to be evident.

When all goes well, this entire procedure should not take longer than five minutes with only one or two minutes of actual fluoroscopy. Naturally, not every examination will run as smoothly as this, but the majority will. The all-important factor is that a correct diagnosis has been made with very little roentgen exposure to the baby.

We are often asked about the problem of pylorospasm and how to differentiate it from true pyloric stenosis. We do not dignify pylorospasm as a real organic diagnosis. A frightened, screaming, unhappy baby may retain barium in the stomach for hours, but this is a very different picture. The stomach is lifeless, and no peristaltic activity is present. As an extreme example of this, we once carried out a gastrointestinal examination on a baby in whom the pylorus did not open until sometime between 2½ and 3 hours. This was before we had a ratchet attachment on our fluoroscope to prevent the screen from coming in contact with the baby. With the lights off, we did not realize we were touching the child until the technician brought it to our attention. We must have upset the baby extremely because it took 2½ to 3 hours for the baby to calm down and peristalsis to begin. The following day we did an abbreviated study and fed the baby with tender loving care in the arms of the technician. The baby "cooed" and "gurgled" and made all the happy noises contented babies make. Not more than five minutes elapsed from the time the technician began to feed the baby until we looked at him under the fluoroscope. We were amazed as the stomach was empty and it was necessary to give more barium to visualize the bulb.

Pylorospasm is an entity, but it is dependent upon the emotional state of the baby which in turn depends upon the emotional state of the mother which in turn may depend upon the emotional state of the father. There should be no difficulty in differentiating a true pyloric stenosis with its associated peristalsis from pylorospasm with its lifeless stomach.

John W. Hope, M.D.

Editor's Note: Dr. Hope is head of the Department of Radiology at the Children's Hospital, Philadelphia.

Amebic Colitis

Diagnosis by Rectal Biopsy

H. R. YATES, Jr., M.D.
B. B. WEISIGER, M.D.
Richmond, Virginia

AMEBIC COLITIS is a protozoan infection of the colon by Endamoeba histolytica. Amoeba are considered endemic throughout the world, and while the greatest areas of concentration are the tropical and sub-tropical areas, the temperate zones are not spared. Neumann[1] did stool examinations on 222 consecutive patients regardless of their symptomatology in a gastroenterology clinic in Brooklyn, New York, and found the leading parasitic infestation to be amebic. 21 patients were found to have amebiasis; an incidence of 9.5%. Approximately one-half of these patients apparently acquired their infection in Brooklyn. In the State of Virginia[2], during 1953, 1954 and 1955, there were 20, 20 and 18 cases respectively of amebiasis reported to the State Health Department. There were three deaths in 1954 and three deaths in 1955 attributed to amebiasis. In the past five years at McGuire Veterans Hospital, amebic colitis has been diagnosed in 10 cases. In the past six months we have had the opportunity of observing two cases of amebic colitis at McGuire Hospital. These were diagnosed by proctosigmoidoscopy and confirmed by biopsy and subsequent stool examination.

It is our purpose here to: (1) re-emphasize that amebiasis is endemic in Virginia, (2) demonstrate that the rectal lesions of amebic colitis may frequently be diagnosed with ease at proctosigmoidoscopy with rectal biopsy and (3) report two cases of amebic colitis diagnosed by this method.

The following are two case reports of amebic colitis so diagnosed:

Case 1: HWS, 79-737, a 60 year old colored male, from Halifax County, was admitted to McGuire Hospital for the first time on July 27, 1956, complaining of lower abdominal pain and watery diarrhea for 2½ months. He had had from 7 to 9 stools a day with abundant mucus, a foul odor and occasionally a very small amount of bright red blood. He also stated that he had had fever each time his doctor had examined him. He denied chills. The patient also noticed progressive weakness, dizziness, a 60 pound weight loss and anorexia. Prior to the onset of his present illness, he had been essentially well. Physical examination showed a thin, chronically ill, Negro, male. His vital signs were normal. He weighed 147 pounds. A grade two apical systolic murmur was heard. Abdominal examination revealed diffuse tenderness with no palpable masses.

Laboratory studies showed an hematocrit of 35 volumes per cent, hemoglobin of 11.8 gms. per cent, corrected E.S.R. 28 mm/hour and a leukocyte count of 11,100 per cubic mm. with 88% neutrophils, 10% lymphocytes and 2% monocytes. Urinalysis was negative except for 30 to 40 white cells per high power field. The serologic test for syphilis was negative. Hepatic function studies were entirely normal. Proctoscopic examination revealed multiple small hemorrhagic ulcerations predominantly at the 17 to 25 centimeter level, but also scattered throughout the rectum. After a covering plug of blood and mucus had been wiped away the ulcerations were of a punched out nature with discreet margins. The intervening mucosa was not friable and did not bleed easily. Several biopsies were taken and fixed in 10% formalin. The histologic slides stained with hematoxylin-eosin revealed fragments of rectal mucosa. The superficial layer of epithelium was eroded and the resulting shallow ulceration was covered by fibrino purulent exudate. Numerous trophozoites of E. histolytica were seen within the exudate (Fig. #1). Several of the amebae contained erythrocytes. The pathologic diagnosis was amebic ulcer of the rectal mucosa. Stool examinations were weakly positive for occult blood. The first two stools for ova and parasites were negative; however, a third stool which was liquid showed motile trophozoites of Endamoeba histolytica. Confirmation was obtained on a repeat stool examination. A barium enema revealed marked redundancy, spasticity, irritability and a suggestion of edema of the sigmoid colon. A moderate sized diverticulum was also present in the sigmoid colon. There was diffuse irritability of moderate degree throughout the remainder of the colon.

From The Gastroenterology Section of the Medical Service of McGuire Veterans Administration Hospital, Richmond, Virginia.
Dr. Yates is now in practice at 920 South Jefferson Street, Roanoke, Virginia.

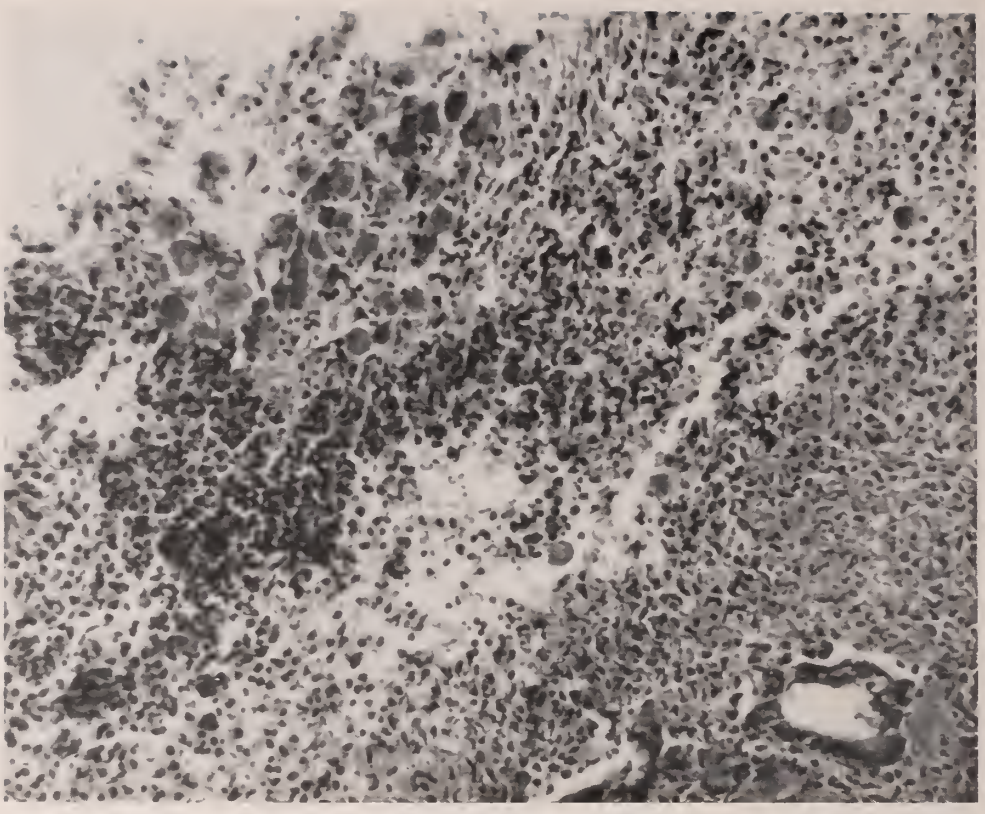


Fig. 1.—High power view of the trophozoites of E. histolytica surrounded by fibrinopurulent exudate.

Course in the hospital: The patient was placed on Chloroquine phosphate 0.5 gms. twice daily for two days, then 0.5 gms. daily for 17 days and oxytetracycline 500 mg. four times a day for 10 days. During therapy the patient had only two stools per day, became asymptomatic and with a voracious appetite gained 11 pounds. Purged stool examinations prior to his discharge were negative for Endamoeba histolytica. After a ten day rest period from therapy following discharge he was instructed to take Diodoquin tablets—650 mgm. 3 times a day for 20 days and to have stool examinations done by his local physician. The patient returned to the Out-Patient Department some two months later and was found to be completely asymptomatic. His weight at this time was 190 pounds. Proctoscopic examination to 25 centimeters was entirely normal.

Case 2: JM, 82-702, a 64 year old colored, male, from Petersburg, Virginia, was admitted to McGuire Veterans Hospital on November 14, 1956, complaining of diffuse cramping pain in the abdomen for 3 months associated with alternating diarrhea and constipation, bright to dark red blood mixed with his stools, anorexia, weakness and an unknown amount of weight loss. Physical examination showed a gaunt, Negro male with evidence of chronic weight loss and normal vital signs. He weighed 123 pounds. Abdominal examination revealed rigidity and tenderness throughout the abdomen.

Laboratory data revealed a hematocrit of 43 volumes per cent, hemoglobin of 12.9 grams per cent, leukocyte count of 14,800 with 81% neutrophils, 16% lymphocytes and 3% monocytes. Urinalysis revealed 25 to 30 white cells per high power field. The serologic test for syphilis was negative. Sigmoidoscopy performed on the day after admission revealed shallow ulcers with normal mucosa intervening. The ulcerations themselves were punched out and had a hemorrhagic base. There was no gross bleeding from the ulcerations. A presumptive diagnosis of amebic colitis was made and several biopsies were taken of the mucosal ulcers and the fragments of tissue were fixed in 10% formalin. Histologic slides stained with hematoxylin and eosin showed parts of the mucosa to have undergone necrosis and ulceration (Fig. #2) and the necrotic portion was heavily infested with the trophozoites of E. histolytica. The amoebae were present in large numbers and there was relatively scanty inflammatory cellular reaction around them. Many of the amobae contined erythrocytes in various stages

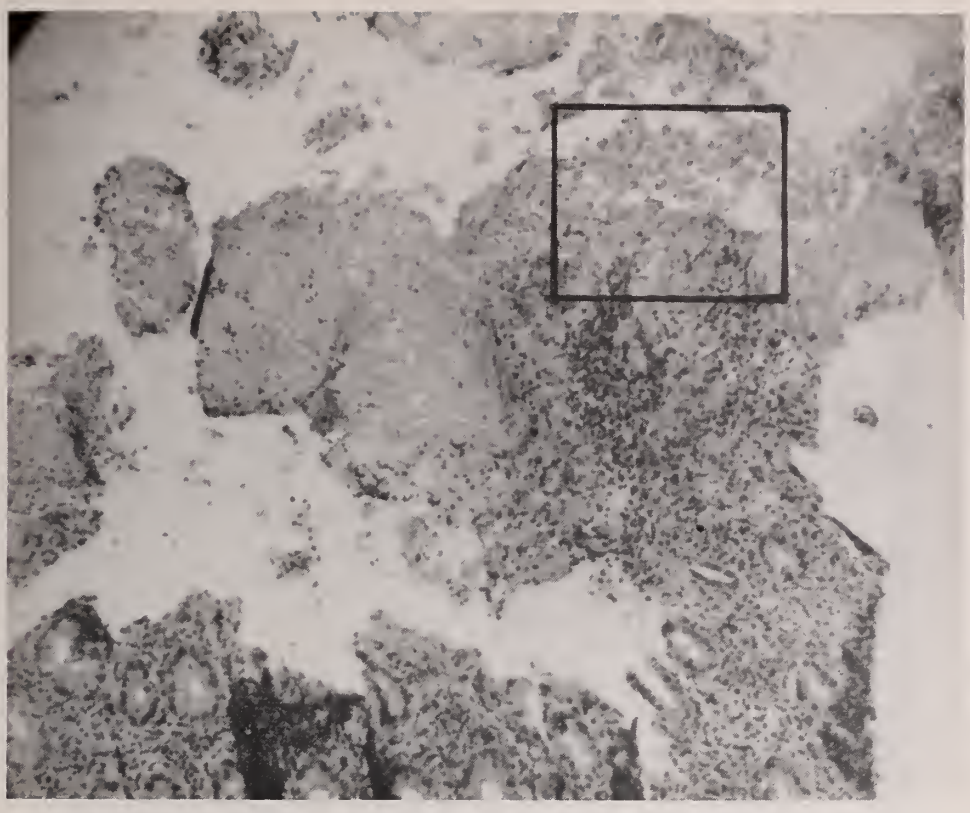


Fig. 2.—Low power photomicrograph from Case #2 showing an aggregate of amebae within the necrotic edge of a rectal ulcer.

of digestion. (Fig. #3) A diagnosis of rectal amebiasis was made. Subsequent stool examinations revealed motile trophozoites of Endamoeba histolytica. Hepatic function tests failed to reveal any abnormality. Barium enema revealed the mucosal pattern to be somewhat irregular and coarse throughout the entire colon. No definite ulcerations were seen.

Course in the hospital: The patient was given Chloroquin 0.5 gms. twice a day for two days and then 0.5 gms. a day for two weeks and Tetracycline 0.5 gms. every six hours for 10 days. He became asymptomatic and gained 9 pounds during his hospitalization. The patient was returned to the care of his local physician. After a ten day rest period from therapy he took Diodoquin, 650 mgm. 3 times a day for 20 days.

DISCUSSION

Symptomatic amebiasis or amebic colitis may vary from vague gastrointestinal symptoms to a severe dysentery with fever, weight loss, melena and amebic ulceration of the colon with or without amebic abscesses of the liver. Since proctosigmoidoscopy is available almost universally, a high degree of positive results may be found with biopsy and the study of the aspirated sigmoidoscopic material. Radke[3] found a positive diagnosis made in 27 of 45 cases of amebiasis who had rectal biopsies; and sigmoidoscopic examination was suggestive of amebiasis in 43 of 54 cases in the same series. The necessity for early and accurate diagnosis was revealed by the fact that 26 of 42 cases on whom surgery was performed for tumor, intestinal obstruction or extra-rectal mass due to unsuspected amebiasis died. The biopsy itself can be carried out with little or no danger of bleeding. Bloody mucus or liquid feces may be easily collected at the time of the examination and likewise yield a high percentage of positive results.

Bockus[4] has described the typical amebic ulcer as being 4 to 15 mm. in length, oval and punched out with sharply defined margins. The differential point between amebic ulcers and ulcerative colitis or bacillary dysentery is the absence of inflammatory changes in the intervening mucosa. With secondary infection in amebic colitis the diagnosis may not be apparent until biopsy and aspirated materials are examined carefully for amoeba. In the absence of proctoscopic evidence where the diagnosis is suspected, saline cathartic purges with immediate examinations of the warm stools may reveal amoeba.

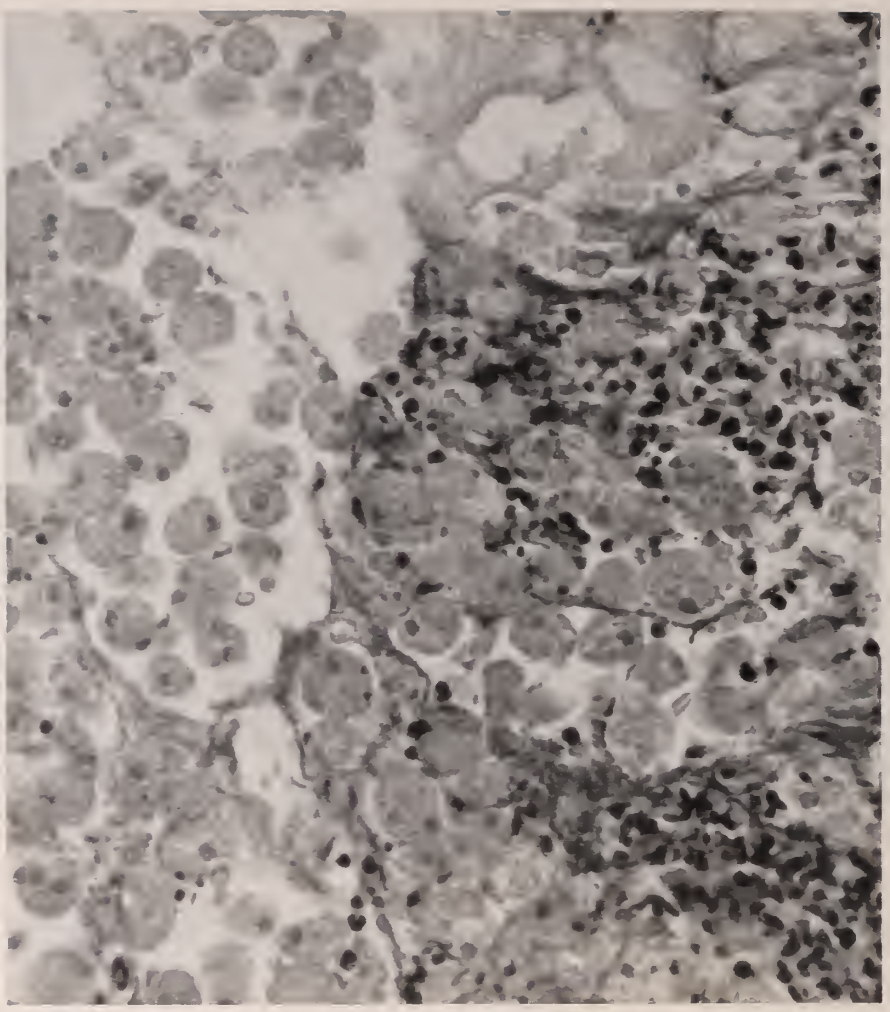


Fig. 3.—High power view of amebae clustered within the ulcer. Phagocytosis of erythrocytes can be seen.

Barium roentgenography, bismuth containing preparations, colloid laxatives and treatment should be withheld until proctosigmoidoscopy, biopsy and at least two warm purged or liquid stools have been examined. The x-ray appearance of amebic colitis and amoeboma have been well described elsewhere[5,6], as have the current concepts of therapy[7].

SUMMARY AND CONCLUSIONS

1. Two cases of amebic colitis are presented.
2. The diagnosis was made clinically by proctoscopy, and confirmed by rectal biopsy and stool examinations.
3. A satisfactory therapeutic regimen is outlined.
4. Amebiasis must be considered endemic in Virginia.

Acknowledgement

We wish to thank Dr. Simon Russi of the Department of Pathology, McGuire Veterans Hospital, for his interpretations of the histopathology of the specimens.

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McGuire VA Hospital
Richmond, Virginia

A Cryoglobulin with Unusual Characteristics Associated with a Rare Hematologic Disorder

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White Sulphur Springs, West Virginia

SINCE Lerner and Watson[1] introduced the terms cryoglobulin and cryoglobulinemia, much has been written on the nature of these altered serum proteins which precipitate spontaneously from cooled serum and on the conditions in which they occur. Cryoglobulins in widely varying concentration and with markedly different physico-chemical characteristics have been described in many clinical condition[2-20].

Waldenstrom[21,22] has used the term macroglobulin to designate abnormal serum proteins of very high molecular weight, i. e., with sedimentation constants around 19-20 S. In his experience these have occurred in a characteristic clinical syndrome. Others have since reported macroglobulinemia in similar cases[19,23]. One of us (M.L.P.[15]) has previously studied in detail the physico-chemical properties of a serum macroglobulin which was also a cryoglobulin.

The case herein reported is of interest because the macromolecular cryoglobulins occurring in this unusual hematologic condition possess physical and immunological characteristics not previously described.

CASE REPORT

The patient, a 60 year old white farmer, was first seen by one of us (W.D.I.) in August of 1953. He had been in good health until one month previously when he had the "flu". Recovery from this upper respiratory illness was incomplete, and he complained of continuing weakness, lassitude and numbness and tingling of the hands and feet. No further symptoms were elicited in a review of the systems.

Except for the childhood illnesses and an undiagnosed bout of painless hematuria 15 year previously, he had been singularly well. Two years prior to the present illness he was bitten by a copperhead snake and received antivenom serum. This was followed by serum sickness characterized by fever, malaise and generalized skin rash.

The family history was negative for so-called familial diseases. Particularly there was no family history of blood dyscrasias or neoplastic disease.

Positive physical findings were pallor of the skin and mucous membranes and a moderate splenomegaly, the spleen being palpated three centimeters below the costal margin. There was no lymphadenopathy.

When laboratory studies were attempted, jelling of the blood in the pipettes and on the slides and flocculation in the diluting fluids was observed.

He was referred to the hematology service of a university hospital where the hemogram was as follows: red blood cell count, 3,300,000 per cu. mm.; hemoglobin, 9.6 gm. per cent; hematocrit, 30 per cent; mean corpuscular volume, 90 cu. microns; mean corpuscular hemoglobin, 29.1 micromicrograms; mean corpuscular hemoglobin concentration, 31.2 per cent; white blood cell count, 4,300 per cu. mm.; band forms, 1 per cent; segmented forms, 55 per cent; large lymphocytes, 1 per cent; small lymphocytes, 36 per cent; monocytes, 6 per cent; reticulocytes, 1.7 per cent of red blood cells; platelets 99,000 per cu. mm.

Blood chemistry determinations gave these results: total serum protein, 9.6 gm. per cent; albumin, 3.4 gm. per cent; globulin, 6.2 gm. per cent; serum calcium, 10.6 mg. per cent; serum phosphate, 3.1 mg. per cent; serum phosphatase, 4.7 Bodansky units.

There was Bence Jones proteinuria. Urinalysis was not otherwise remarkable.

The bone marrow contained: promyelocytes, 1 per cent; myelocytes, 8.5 per cent; juvenile forms, 1 per cent; band forms, 6.5 per cent; segmented forms, 15 per cent; monocytes, 1.5 per cent; lymphocytes, 62.5 per cent; eosinophiles, 2.5 per cent; plasma

Acknowledgement: The authors wish to express their appreciation to Mrs. Mary G. Hamilton for carrying out the electrophoretic and ultracentrifugal analyses.

From the Greenbrier Clinic and the Sloan-Kettering Institute for Cancer Research.

This work was supported in part by funds from the United States Atomic Energy Commission under their contract AT (30-1) 910.

Read before the West Virginia regional meeting of the American College of Physicians, September 29, 1956.

cells, 5.5 per cent. Many of the lymphocytes appeared young and atypical.

No skeletal lesions could be demonstrated by radiological survey. Barium studies of the gastrointestinal tract revealed it to be normal.

A provisional diagnosis of chronic lymphatic leukemia was made. Trial courses of T. E. M. and cortisone did not appreciably alter the disease. In the next several months the hematologic picture was not significantly changed spontaneously or by therapy. Repeated marrow aspirations were obtained from the sternum, iliac crest and vertebral processes with findings similar to the original study. The progressively severe anemia was compensated by numerous transfusions. As long as his hemoglobin was kept at a reasonable level, he felt well and worked regularly.

Paper electrophoresis of the serum proteins in July 1954 showed a high gamma globulin peak similar to the multiple myeloma pattern. A quantitative determination of the serum cryoglobulin revealed 2.4 gm. per cent of cold precipitable protein.

The patient was first referred to the Greenbrier Clinic on August 14, 1954. He was completely restudied with findings comparable to those described. The spleen had apparently enlarged further, but there were still no palpable lymph nodes. There was a normocytic, normochromic anemia with normal red blood cell constants, hyperglobulinemia, marked cryoglobulinemia and Bence Jones proteinuria.

Marrow slides (Fig. 1) were sent to several hematologists and pathologists for interpretation. There was complete agreement on the morphology of the marrow elements. The predominating cell type was the lymphocyte, many of which were atypical, appearing young and reticular. There was an increase in the reticulum cells and plasma cells. Most examiners felt that the marrow was not diagnostic of any specific blood dyscrasia. Dr. D. G. Hanlon of the Mayo Clinic felt the condition could be "best classified as a malignant disease of the reticulum, so-called reticulo-endotheliosis."

In October of 1954 it became apparent that myelophthisis of the marrow could not alone account for the rapidity with which the patient developed anemia after restoration by transfusion. The progressively enlarging spleen also suggested a hemolytic component and this was demonstrated by appropriate studies.

On November 11, 1954, the spleen and an accessory spleen were removed. The pathologic report was: "There is marked congestion with dilated

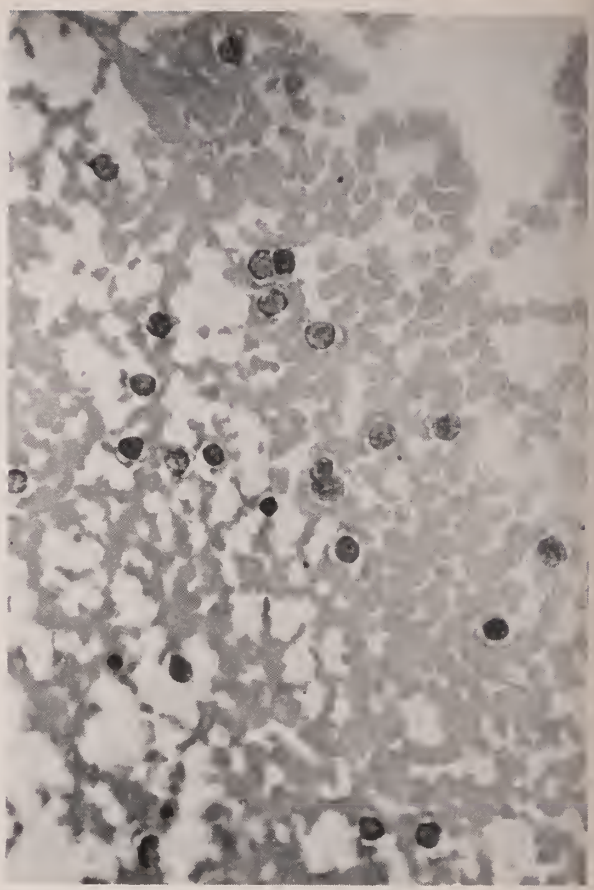


Fig. 1.—Bone marrow. Atypical lymphocytes predominate.

sinusoids. The pulp cords contain a moderate number of cells resembling lymphocytes and reticulum cells. The follicles are atrophic. There are no mature polymorphonuclear leukocytes seen. Some of the sinusoids contain an occasional small focus of cells resembling hematopoiesis. Occasional large cells may represent megakaryocytes. The changes are not diagnostic." (Fig. 2).

Following splenectomy anemia developed much less rapidly, and he was able to go for several months without transfusions. His general health remained reasonably good but the hematologic picture, hyperglobulinemia and cryoglobulinemia were essentially unchanged.

It was felt that the cryoglobulins should be more completely studied. In April and May of 1955 blood was collected, using sterile, warmed apparatus. It was allowed to clot at 37.5° C and centrifuged. The serum was sent to the Sloan-Kettering Institute for Cancer Research where it was examined by one of us (M.L.P.). These studies are reported in a separate subheading (vide infra.).

By May of 1955 anemia was again a serious problem and numerous transfusions were required.

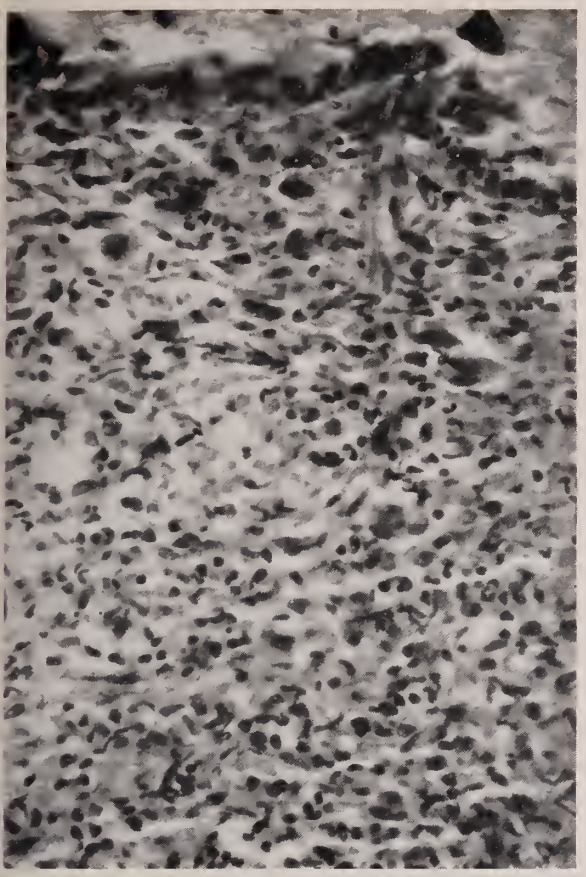


Fig. 2.—Spleen. See text for morphologic description.

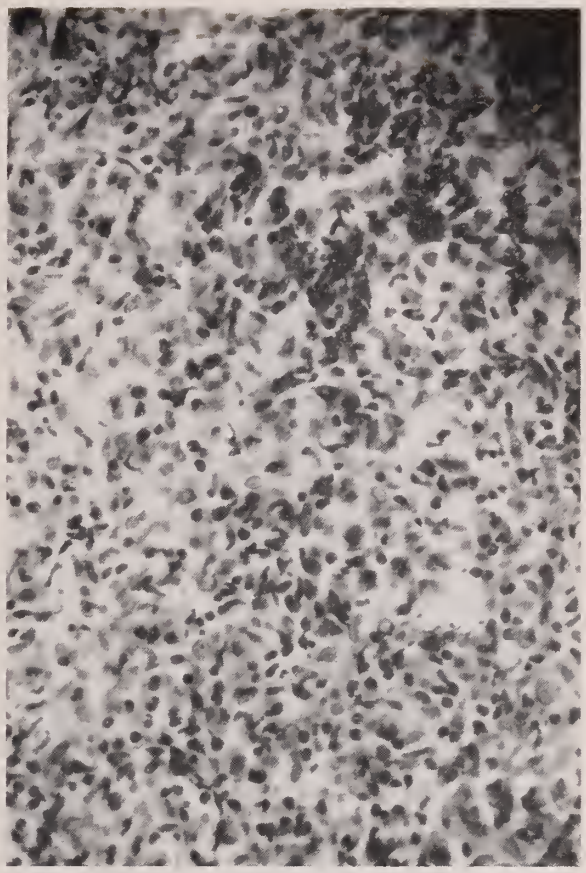


Fig. 3.—Tonsil. Note similarity of morphology to spleen (Fig. 2).

A tonsil became ulcerated and was biopsied but was not diagnostic. The microscopic picture resembled that found in the bone marrow and spleen (Fig. 3).

In August, 1955, the general condition seemed to be deteriorating. A hemorrhagic diathesis developed. Shaving nicks bled for 24 to 48 hours and there was purpura of the lower extremities. Cervical lymph nodes began to enlarge.

Laboratory studies revealed anemia, thrombocytopenia and leukocytosis. The platelet count was 70,000 per cu. mm. and the white blood cell count was 12,000 per cu. mm. There were 89 per cent lymphocytes most of which were atypical and immature. The bone marrow was essentially morphologically unchanged. A lymph node biopsy was contemplated but was deferred because of the hemorrhagic diathesis.

A course of nitrogen mustard was given with some temporary benefit.

In December of 1955 his condition seemed very precarious. A course of ACTH was given and the response was remarkable. His hemoglobin rose to 12 grams, the lymphadenopathy almost disappeared, and the general physical condition markedly improved. In March, 1956, he developed massive gastrointestinal bleeding and a subtotal gastrectomy was performed for a large ACTH gastric ulcer. Convalesence from this operation was satisfactory. However, in the summer of 1956 he developed progressive weakness, weight loss and anemia. He died at home in August. Permission for postmortem examination was refused.

PHYSICO-CHEMICAL STUDIES

For electrophoretic analysis, a sample of serum was diluted with 2 volumes of veronal buffer, pH 8.6 and ionic strength 0.10, at 37°C, and then dialyzed against cold buffer. With this procedure a small amount of cryoglobulin usually remains in solution (15). In this case, however, the electrophoretic pattern showed only a large, broad gamma globulin boundary with no macroglobulin spike. The concentrations of the various electrophoretic components were albumin, 3.39; alpha-1, 0.36; alpha-2, 1.09; beta, 0.64; gamma-1, 0.31; and gamma-2, 1.12 grams per 100 cc. Both the alpha-2

and the gamma-2 values are about 40% above the normal levels.

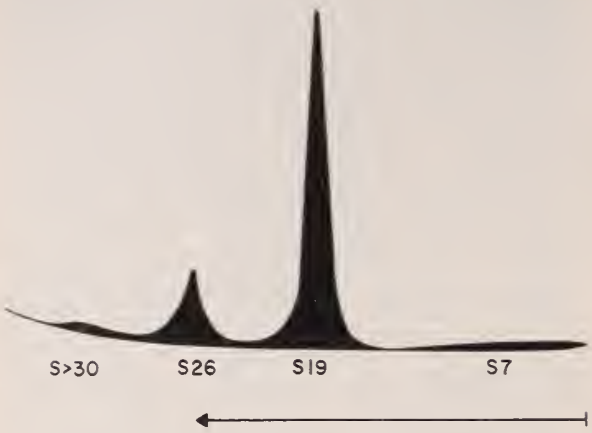


Fig. 4. Ultracentrifugal pattern of cryoglobulins.

A second sample of serum was diluted warm with 0.1M sodium bicarbonate, pH 8.3, and dialyzed against cold bicarbonate. Electrophoretic analysis of the soluble protein showed a large sharp peak in the gamma globulin region. A gamma globulin mobility was also found by Korngold, in filter paper electrophoresis at room temperature in a phosphate buffer[24].

Ultracentrifugal analyses were carried out as described[15]. The undiluted serum, at 35°C, showed the usual albumin and globulin boundaries, and a very sharp line moving ahead of the globulin. After dilution with two volumes of warm saline two sharp macroglobulin boundaries and a trace of a third were seen.

The cryoglobulin was separated from the serum at 5°C, precipitated a second time from 0.15M NaCl, and dissolved in 0.15 M. NaCl. The protein concentration was measured by ultraviolet absorption at 280 Mu; use of the extinction coefficient of normal human gamma globulin, 13.5, gave a protein concentration of 0.81 per cent, in good agreement with the value of 0.76 per cent obtained from the ultracentrifugal analysis.

Four ultracentrifugal analyses were carried out on this preparation, and two on the more extensively purified preparations studied by Korngold[24]. The amounts of the various components were calculated from the areas under the curves[15]. A typical pattern is shown in Figure 4. The three components have been named by the sedimentation constants obtained on extrapolation to infinite dilution, as previously described[15]. The constants obtained on the two principal components were about 19 and 27S. The small fast component had an extrapolated sedimentation constant of 35S. The relative amounts of the three components were 72 per cent for S19, 22 per cent for S27, and 6 per cent for S35. A trace of S7 was also present, even in Korngold's preparations. Changing the protein concentration, from 0.8 to 0.4 per cent; the temperature, from 35° to 25°C; or the ionic strength, from 0.15M to 0.075M NaCl, had no effect on the relative amounts of the three components. Korngold's preparation I-4 (four times precipitated) (24) in 0.15M NaCl at 35°C, gave similar results. His preparation I-6, which had been precipitated twice with veronal[24], showed some aggregation; it contained 54 per cent S19, 27 per cent S27, 11 per cent S35 and 8 per cent of an even faster component, with a sedimentation rate of over 40S.

This cryoglobulin resembled the macrocryoglobulin previously studied in this laboratory[15], and others in the literature, in being a gamma globulin and in having a principal component with a sedimentation constant of 19S and a secondary component of 27S. It differed from the protein previously studied in four respects.

1) The boundaries were not clearly defined in undiluted serum, but did show up well in diluted serum.

2) The S19 and S27 components were much more clearly separated.

3) No association or dissociation reactions were observed.

4) This cryoglobulin had a very low solubility in cold veronal. The effect was specific for veronal; the protein was much more soluble in cold chloride, bicarbonate or phosphate.

The details of the immunological analysis, which was carried out by Dr. Leonhard Korngold, will be published elsewhere[24]. According to the Ouchterlony technique, this cryoglobulin was antigenically unrelated to multiple myeloma cryoglobulins[25].

In summary the cryoglobulin was found to be insoluble in cold veronal buffer. In bicarbonate and phosphate buffers it had the mobility of gamma globulin. Ultracentrifugal analysis revealed four boundaries: a trace of S7, 72 per cent S19, 22 per cent S27 and 6 per cent S35.

DISCUSSION

Clinically, this case very closely resembles those described by Waldenström[21,22], but there are certain differences. The principal features of his cases were weakness, pallor, hemorrhagic diathesis, lymphadenopathy, anemia, greatly accelerated erythrocyte sedimentation rate, hyperglobulinemia and fibrinogenopenia. Bone marrow studies revealed a rela-

tively uniform picture consisting of proponderantly lymphocytoid cells which were variously described as atypical lymphocytes, reticular lymphocytes, etc. At times there seemed to be "transition forms" between these and plasma cells[23]. Some increase in reticulum cells and plasma cells occurred, although the latter were never sufficiently common to suggest myeloma.

In addition to the above features this case had a marked splenomegaly, autoimmune hemolytic disease, Bence Jones proteinuria, and purpura. Hemolytic disease associated with cryoglobulinemia has been previously reported[7,18] but other clinical features were quite different from this case. Purpura has been frequently associated with cryoglobulinemia [1,3,6,10]. However, since the purpura in this case was temporally associated with a marked hemorrhagic diathesis rather than exposure to cold we expect that it was on this basis rather than being due to jellification of the cryoglobulins in the peripheral capillaries as previously postulated.

The descriptive term of reticulo-endotheliosis is not universally accepted by pathologists and hematologists as a definitive diagnosis. Yet, the present case does not meet the criteria of the more orthodox blood dyscrasias.

In a patient with the presenting symptoms of this case, one naturally thinks of multiple myeloma. However, the absence of myeloma cells in numerous marrow specimens from several sites, the marked splenomegaly, the lymphadenopathy and the absence of bone changes after nearly three years are evidence against myeloma or even "incipient myeloma". Further, it has been shown that myeloma globulins are usually characteristic of the disease[21]. In this case the abnormal globulin differs antigenically from myeloma globulins[25].

The diagnosis of chronic subleukemic lymphatic leukemia was carefully considered. Cryoglobulinemia has occurred in lymphatic leukemia[7]. This is the most likely alternate diagnosis. There are, however, two things against this conclusion. First, no pathologist or hematologist reviewing the sections felt that this was the morphologic picture of lymphatic leukemia. Secondly, Snapper has pointed out that hyperglobulinemia of more than slight degree does not occur in leukemia[26]. However, Rundles and co-workers have reported cases of leukemia with hyperglobulinemia[20].

Lymphosarcoma tends to be more focal in nature. One would not expect to find a uniform involvement of bone marrow from the sternum, ilium and vertebrae. Further, splenomegaly is uncommon in lymphosarcoma, occurring in only 21 per cent of one large series[27]. When present it was minimal "unless a leukemic picture was present".

Reticulum cell sarcoma must be considered. Reticulum cells were definitely increased in the bone marrow, spleen and tonsil but were far from the predominant cells in any section.

The absence of Reed-Sternberg cells in all sections and the diffuse nature of the process are uncharacteristic of Hodgkin's disease.

Certainly the term reticulo-endotheliosis is the most descriptive one for the pathologic process herein described. While it may not be a legitimate definitive diagnosis, it seems preferable to Waldenström's "incipient myelomatosis"[22], since myeloma has not been shown to develop in these cases.

Small amounts of cryoglobulins are not uncommon and occur in many conditions[2,13]. However, cryoglobulins in moderate to marked concentration are unusual[13,17] even in multiple myeloma, the condition in which they most commonly occur. In the latter condition the cryoglobulins usually travel with the gamma globulin on electrophoresis[21].

The possible stimuli to abnormal serum protein synthesis have been fully discussed[21]. In some cases hyperglobulinemia is obviously a response to infection, i. e., Kala azar, lymphogranuloma inguinale, etc. In others it seems apparent that it is a by-product of neoplastic cells, i. e., multiple myeloma. In still others, as rheumatoid arthritis, disseminated lupus erythematosis, polyarteritis nodosa and experimental hyperimmune states, the abnormal globulins are thought to result from an immunologic reaction. Waldenström[22] has postulated that his cases which resemble this one in many essentials may result from a virus infection. Because of the clinical behavior of the disease we favor a neoplastic origin. However, all etiological concepts are speculative at present.

As emphasized by MacKay and co-workers[28] the physico-chemical properties of cryoglobulins and macroglobulins are quite variable. These are not single species of proteins but usually consist of multiple components. In addition to varying from patient to patient, multiple components are often found in the individual patient. This is well illustrated by the present study.

The physical changes which these abnormal proteins undergo with temperature changes, causing them to precipitate with various degrees of cooling and to redissolve with warming, have been previously

examined[15]. There is considerable evidence for association-dissociation reactions in some cases[15] but no evidence of this in the present studies. Concentration, ionic strength, pH, purification, and the nature of the buffer ions present all influence this phenomenon, but there is considerable variation in the effect of each environmental factor from cryoglobulin to cryoglobulin. More studies are needed to delineate precisely the mechanisms involved.

SUMMARY

1) A case of an unusual hematologic disorder with unique serum globulin is reported.

2) Electrophoretic and ultracentrifugal studies of the macromolecular cryoglobulins occurring in this case are presented.

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The Value of Vaginal Smears In Routine Office Studies

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DURING THE PAST DECADE, because of increased interest in early cancer detection, much enthusiasm has developed in exfoliative cytology. The study of cells cast off in body secretions is applicable to all branches of medicine, but it is in the field of gynecology most interest has arisen and it is in this specialty that the value of such studies has proved to be most rewarding.

The study of cells contained in vaginal secretions has been shown to be not only a practical method in the early detection of malignant changes in the genital tract, but also has proved to be a method of discovering suspicious pre-cancerous conditions.

The Cancer Committee of The Medical Society of Virginia, although aware of the arguments against the use of vaginal smears as part of routine examinations, is cognizant of the great advantages offered by early diagnosis of malignant conditions. In its desire to further the cancer program throughout the State of Virginia, it favors more wide-spread use of vaginal smears in cancer detection, and has endorsed a program recommending that vaginal smears be included as a part of routine examinations.

In an effort to encourage those in the field of internal medicine and other branches of medicine to participate in this program by including the vaginal smear as part of their diagnostic armentarium, this discussion has been prepared.

It would probably be wise to first dispel some untruths that exist concerning the practical applications of exfoliative cystology. Often it has been stated one must be especially trained in the field of cytology, and that there are a very limited number of workers capable of performing cell studies. This is surely not true and it is an accepted fact that any well trained pathologist with some practice may become proficient in this work.

Another opinion frequently expressed is that a rapid increase in cytologic examinations might outgrow the available facilities for the proper handling of such material.

Presented at the meeting of the American College of Physicians, Williamsburg, Virginia, March 2, 1957.

TABLE # 1

PAPANICOLAOU SMEAR STUDY

State of Virginia	July, 1956
Number of hospitals surveyed	20
Number of cases studied (per month)	2900
Number could be studied (per month)	4800

This is a survey we made in July, 1956, of the pathology departments of 20 hospitals throughout the State. It shows that much more work could be handled under existing conditions. Undoubtedly, the available facilities would be increased as the demand arises. At the present time, the larger institutions have trained technicians for the purpose of screening cytology smears. During the past several years with the aid of a grant from the American Cancer Society, a machine based on the use of photo-electric cells has been developed as an aid in screening slides. At present, this machine is practical only in the largest centers. It is in the stage of development and may prove to be valuable in cytology studies in the future.

That the vaginal smear is a reasonably accurate means of determining the presence of early malignancies has been proved. Many reports have been published which give the incidence of detected cancer when using this method as a screening procedure. Erickson reported an incidence of 0.73% carcinoma and intraepithelial carcinoma in a study of 108,000 women. So many influencing factors exist that it does not seem such studies should be used as a basis for comparison for statistical purposes at this time. It will be pointed out later that a difference of opinion exist among pathologists in determining precancerous lesions of the cervix. This leads to marked variations in the reported incidences.

A survey was made to investigate the results obtained by the use of vaginal smears in the Norfolk area. In this community there has been no research project or scientific investigation by any group to stimulate the use of this procedure. Interest in it has developed solely on the part of practitioners of medicine. Because of the desire to know the results obtained on this basis, the following study has been made.

The material of the pathology departments of the three Norfolk hospitals during a period of twelve months—from November 1, 1955 through November 1, 1956—was chosen for this survey.

Many cases which were diagnosed as suspicious or positive for malignancy by vaginal smears were omitted from this series because of the presence of symptoms or signs that warranted specific diagnostic procedures. Only those cases in which detection of the pre-cancerous and cancerous lesions could be attributed 100% to cytological studies were included.

At this point it seems appropriate to emphasize that cytologic studies are to be used only as a screening test and that they are never to be considered as diagnostic. A vaginal smear must never be used as a substitute for biopsy or curettement.

TABLE #2

VAGINAL SMEARS
Norfolk, Virginia
November 1, 1955 through November 1, 1956

Total cases	4,725
Carcinoma in-situ	22
Invasive carcinoma	8

The table shows that 4,725 cases were studied in the three Norfolk hospitals during this 12 months period. Carcinoma in-situ was diagnosed 22 times; invasive carcinoma 8 times. An effort was made to determine the number of smears that were diagnosed as suspicious and positive in which subsequent studies revealed no evidence of malignant or pre-malignant changes. The necessary follow-ups on these false positives could not be accurately obtained, and for this reason those cases were omitted from the survey. Undoubtedly a fair number of patients underwent unnecessary procedures as a result of incorrect interpretations, but the impression was gained that this number was certainly not out of proportion.

TABLE #3

STUDIES REQUESTED

Internists	6.7%
General Surgeons	1.8%
Gynecologists	80.4%
General Practitioners	3.8%
Clinic	7.3%

This table shows that in one of the hospitals the internists requested 6.7% of the vaginal smears; general surgeons 1.8%; gynecologists 80.4% and general practitioners 3.8%. From the clinic 7.3% were requested.

At the present time smears are reported by various classifications. The most generally accepted is by grades from 1 through 5. The first two are considered negative for malignancy; grades 3 and 4 as suspicious; and grade 5 as positive for malignancy. No classification at the present time is such that one can be guided by grading alone, and it is necessary to have the opinion of the cytologist as to whether repeat smears or diagnostic procedures are indicated. Although emphasis is placed on the detection of pre-cancerous and cancerous lesions, smear findings will also detect those cases that deserve only more careful observation, since the meaning of certain changes is not yet fully understood.

The most difficult problem which arose with the increased interest in cytologic studies was the question; "what are the histological criteria for diagnosing pre-cancerous lesions?"

There exists a tremendous difference of opinion among pathologists regarding the so-called borderline lesions. A recent report by Siegler serves to emphasize the difference of opinion in microdiagnoses of carcinoma in-situ of the uterine cervix. In this study, the author sent a group of 20 selected slides to 25 competent pathologists for opinion. The following Table #4 shows the marked difference of opinions received.

TABLE #4

NUMBER OF POSITIVE DIAGNOSES OF CANCER MADE BY 25 PATHOLOGISTS ON 20 TISSUE SECTIONS OF QUESTIONABLE LESIONS

(Siegler, Cancer Vol. 9, No. 3; 1956)

No. Pathologists	*No. Positive Diagnoses*
3	0
3	1
1	2
2	3
2	4
2	5
2	6
3	7
1	8
4	9
1	12
1	13

Three pathologists diagnosed none of the sections as positive for malignancy, and one pathologist had 13 positive for malignancy, and it should be pointed out that where several pathologists agreed on the number of positive slides, they agreed in number alone and did not necessarily agree on the same slides.

It must be emphasized that these slides represented selected tissue sections—the so called borderline cases.

Until such criteria are more clearly defined and proved by observation, an unknown number of patients will be incorrectly diagnosed as having

carcinoma in-situ and in turn be subjected to unnecessary surgical procedures.

It has been well established that malignant processes exist in a non-invasive state over a period of years before invading the adjacent tissues. Comparative studies have shown in most cases the age incidence of pre-cancerous lesions to be 8 to 10 years younger than those of invasive cancer. In reviewing cases of cervical malignancies, I was impressed with the number of patients that had been hospitalized during the several years preceding the diagnosis of malignancy for conditions unrelated to gynecological disease. It seems reasonable to assume that many of these patients would have been benefited by vaginal smear studies.

Recently I had the opportunity of seeing a patient on which a routine smear had been reported as positive two years before. She failed to return for follow-up studies as requested and when seen had a definite invasive carcinoma of the cervix. As fate would have it, she seems to have developed most of those complications which are usually considered the result of irradiation.

Once a case has been reported as suspicious or positive for malignancy, a punch biopsy is no longer recognized as an adequate diagnostic procedure. It is generally accepted that conization with a scalpel, removing tissue from the squamo-columnar junction, and high into the endocervical canal is the only satisfactory method of determining the presence of very early lesions. Never should the tissue be removed with high frequency current since it destroys the material for microscopic purposes. Curettement of the uterus is usually performed in association with the removal of cervical tissue.

The treatment of pre-invasive lesions or carcinoma in-situ varies with the age of the patient. In a woman desiring children, excision of the lesion or removal by amputation of the cervix is believed to be adequate. In the older age group, total hysterectomy is usually performed. The treatment of invasive carcinoma of the cervix continues to be radiation therapy. Although some of the larger institutions are performing radical surgery for this condition, it is still considered as experimental.

Studies carried on under the sponsorship of cancer organization have been interested in not only detecting malignancy in individual cases but are also interested in determining such things as incidence rates and the prevalence of carcinoma. These studies are usually performed on women of all age groups. It has been my routine to take vaginal smears at yearly intervals on all cases 26 years of age or older except during pregnancy and on those patients having had a hysterectomy with the removal of the cervix. To date, I have not felt justified in subjecting those under 26, or following total hysterectomy to this expense. As with most scientific procedures, opinions differ on the indications for, and the frequency of its use. The vaginal smear is no exception.

In summarizing, it has been shown that available facilities do exist in this State for more frequent use of the vaginal smears; that it is a reasonably accurate means of determining early malignancies; that the results obtained in the Norfolk area have been shown to be of value; and that it should never be used as a substitute for biopsy or curettement.

Although the gynecologists are more enthusiastic and have applied this method more frequently it is believed that outstanding benefits would be derived when it finds more use in the office of the internist, general surgeon and the general practitioner.

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Milk Sanitation and Public Health

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AT PERIODIC INTERVALS, since the founding of the Department of Health of the Commonwealth of Virginia, the milk sanitation program has become a controversial subject. In my time I can remember at least three occasions when either governmental commissions or the General Assembly became interested in the organizational aspects of the milk sanitation program. The questions that have been most frequently reviewed are:

(1) Which agency of government should assume primary responsibility for milk sanitation—the Department of Health or the Department of Agriculture?

(2) In line with this question concerning organizational and functional responsibility has come the following questions:

(a) Does the present system cause duplication of inspectional services? If so—

(b) Is the duplication of inspection economical to the taxpayer? And

(c) Is the duplication of inspection confusing to the milk industry of this state?

To the informed health officer, there can be only one answer to the first question. Sanitation of milk is a health function and accordingly, should be organizationally assigned to the State Department of Health. Is there duplication of inspection? Based on our experience as health officers, the answer must be yes. Is this duplication costly to the taxpayer? The answer here is, probably not costly in terms of total dollars and cents, but costly in that the system permits duplication and impedes efficiency. Many health authorities believe that the present funds being expended by the Commonwealth of Virginia in supporting the milk sanitation programs of the two agencies, the Department of Health and the Department of Agriculture, if combined, would be a minimal amount rather than a sum adequate to provide an effective state-wide milk sanitation program.

To the next question, does the duplication of functions of the various inspectional services cause confusion to the milk industry? The answer most certainly is yes. We are all familiar with the plight of the dairymen who sometimes have two or more inspectors representing not only geographical and political jurisdictions, but also representing the areas into which the dairymen ship milk. What's worse, they then have to cope with state inspections from the Department of Agriculture, to say nothing of occasional inspections from federal agencies. The interpretation that so many individuals place on the existing regulations and statutes is bound to vary. There are dairy farmers who have improved their milk houses at considerable expense to meet standards for shipping into a specific geographical jurisdiction, who are then confronted by another agency's inspectors and are required to make other costly changes. While these instances are comparatively rare, they cause enough ill feeling when coupled with the confusion that centers around interpretation of minor points in the regulations and statutes to make the dairymen dread the inspector's visits.

If we accept the above as a picture of the existing situation in Virginia today, we can come to only one conclusion, that the responsibility for supervising the sanitary quality of milk should be placed in one agency of government. As workers in the field of public health, we believe it is logical that the program be placed in the Department of Health. No doubt, these reasons may be challenged. The situation is being unduly discussed today. The arguments pro and con largely center around agency loyalty. Because of this, I believe that it is imperative that each and every health worker in the Commonwealth of Virginia familiarize himself with the basic points at issue and ignore the controversial political implications behind the arguments.

Why do we have milk sanitation programs? First, statutes and regulations of the various states and localities are designed to protect the public health by requiring minimal standards and safeguards to assure a safe food product. These statutes usually provide appropriations to assure inspectional services and appropriate enforcement. Universally, they must have as the basic reason the health and welfare of the citizens. Milk sanitation came into being in this country as a part of the organized effort to con-

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trol communicable diseases so prevalent at the turn of the century. Milk-borne outbreaks—typhoid fever, streptococcal infections, diphtheria, staphylococcal infections and other infections occurred with a fair degree of frequency into the late thirties. In 1912, Virginia's rate from infantile diarrhea was so alarmingly high that Dr. Ennion G. Williams, our first state health commissioner, and Dr. Ernest Levy, Richmond's first health officer, crusaded for adequate legislation to protect the state's milk supply. That they achieved their goal is documented by the decline in milk-borne enteric diseases. Aside from minimal standards designed to maintain milk as a nutrient food, the entire sanitation concept is designed to prevent the spread of diseases that are milk-borne. If one accepts this concept, then there can be no argument but that the milk sanitation program logically must be a function of an organized health department.

Second, with the passage of time, wholesome and safe milk has become a public byword. Communities having a high milk rating under Public Health Service appraisal are proud of that rating. The alignment of milk sanitation with health is accepted. It is important that this alignment be protected for two reasons:

(1) Pediatricians and physicians have long advocated milk as an ideal food for children. They have long stressed and emphasized that milk must be safe and protected by public health inspections. The public, in the last thirty years, has come to look to its health department for endorsement of the public milk supply. The public has also learned to think in terms of the health department as being the agency primarily responsible for the safeguarding of this food. Approval and endorsement by a health agency that did not have organizational responsibility for the program would be worthless.

The problems of divided responsibility for milk sanitation was emphasized in an editorial in the March 1956 issue of the American Journal of Public Health. The writer pointed out "the difficulty of continuous milk sanitation and investigation of a milk-borne epidemic in the face of divided authority." The subject of the editorial was a milk-borne epidemic of paratyphoid fever in Lancaster, Pennsylvania, where milk inspection is a responsibility of the Department of Agriculture. The editorial went on to say ". . . when the State Departments of Agriculture and Health undertook to locate the sources of the break in normal protective procedures, the dual authority made that investigation somewhat cumbersome. Also there was an impossible public relations situation in that the public demanded and expected health department action after people got sick, yet the authority with regard to the point at which the break occurred (the pasteurizing and processing plant) belonged to another department." Unless the health department has direct responsibility for the sanitary quality of milk, no health officer or physician in private practice can assure the public at large that the milk that is offered for sale is a safe food.

(2) The dairy farmers and the milk plant operators have become accustomed to think of milk as a healthful food and to look to health agencies for cooperation and approval. The very heart of the industry and its economy is centered around this point. The industry, in all of its public information and advertising, emphasizes the health aspects of milk as a food. The industry could not sell milk if it did not have health as a byword. Consequently, the industry looks on health inspectional services as essential to the milk economy of the state.

All of us as health workers are aware of these facts. All of us realize it is imperative that any decision concerning the organizational alignment of the milk sanitation program be made on an objective basis. There is only one intelligent approach to the solution of the constantly recurring controversy and that is through a fact-finding appraisal conducted by a committee of the Virginia Advisory Legislative Commission. Such a fact-finding committee should be composed of representatives of the General Assembly, the milk industry (both the dairy farmers and plant operators), physicians who are members of The Medical Society of Virginia and citizens at large. The committee should not have representation from either the State Department of Health or the State Department of Agriculture; but instead, should be free to use the staff of these agencies as resource people. Such a committee would also have the privilege and advantage of consulting authorities from recognized public health agencies, agriculturists, economists, etc.

We have been informed that the dairy industry of this state would accept the findings of such a fact-finding committee. Dairymen are well aware of the fact that if the milk sanitation program of this state is arbitrarily realigned by either the Gov-

ernor and the administrative staff of the Commonwealth of Virginia or by the General Assembly, the stigma of political action will lower the prestige that has been gained through the maintenance of relatively high standards.

Lastly, we believe that such a commission would recommend placement of the milk sanitation program in the Department of Health and would recommend standardization of milk regulations on a state-wide basis. Further, we believe that such an ordinance would permit the State Health Commissioner to delegate to component health jurisdictions the sanitary inspection of their own milk sheds and would permit all areas of the state to accept reciprocal reports by health agencies.

It is my honest and sincere belief that the worst thing that could happen to both the dairy industry and to the health structure of the Commonwealth of Virginia would be a hasty decision on this matter. An acceptable solution can be worked out only through the action of a fact-finding committee composed of strong citizen representation. The issue is too large, the subject too important to be stigmatized by a political struggle wherein agencies of the government are pitted against each other. The issue at stake is not agency growth or agency prestige. Rather, it is an issue involving the health of our citizens, the economy of the industry and, from the constitutional viewpoint, alignment of a law enforcement program that has only one reason for its existence—protection of the public health.

1208 Park Avenue
Richmond 20, Virginia

Chemical Tests Useful In The Diagnosis Of Poisonings.

Presumptive chemical tests for several of the substances more commonly involved in poisonings can be made with very little difficulty, equipment or experience.

Such simple, rapid, presumptive tests will be described in successive issues of the Monthly for a number of compounds such as the salicylates, the barbiturates, the sulfonamides, methyl alcohol, carbon monoxide, arsenic and mercury.

Doctor Sidney Kaye, Toxicologist in the Chief Medical Examiner's Office, Virginia State Department of Health, has made these procedures available through the Richmond Poison Information Center.

I. Salicylates

Urine

To 5 ml. of urine add 1 ml. of 10% ferric chloride. Bring gently to a boil, to rule out a possible false reaction due to acetone bodies. If salicylate is present, a purple color will persist. This test is very sensitive and is positive in urine after the ingestion of only one 0.3 Gm. (5 gr.) aspirin tablet. This test is positive for aspirin, sodium, phenyl or methyl salicylates.

Blood

Acidify 5 ml. of blood by adding 0.5 ml. of 10% hydrochloric acid. Extract with 10 ml. of ethylene dichloride. Allow layers to settle and then separate by discarding upper blood layer, and add 2 ml. of 0.2% ferric nitrate to the ethylene dichloride extract. A purple color results if salicylates are present. The color can be compared with standard similarly prepared.

Current Currents

ANNUAL REPORTS of the various committees are published in this issue, and it is hoped that each member of the Society will allow himself sufficient time to read them carefully. Several issues of vital importance to the profession are covered and the committees' recommendations provide an advance look at some of the matters to be brought before the House of Delegates.

PHILADELPHIA will be the scene of the American Medical Association's 11th Clinical Meeting from December 3-6. The center of activities will be Convention Hall, where scientific exhibits, color television, motion pictures, technical exhibits and scientific lectures will be presented. Headquarters for the House of Delegates will be the Bellevue-Stratford Hotel.

Highlights of the three and a-half day convention, geared especially for the nation's family physicians include: (1) Special trans-Atlantic conference between distinguished physicians in London and Philadelphia on "Advances in Chemotherapy of Cancer" via two-way telephone at 3 p.m. EST Wednesday; (2) Complete color television schedule of surgical demonstrations emanating from Lankenau Hospital; (3) Motion picture program daily plus a special session Tuesday evening; (4) Exhibits featuring a well-rounded program and special displays on the history of medicine in the Philadelphia area, fractures and manikin demonstrations on problems of delivery; (5) Panel discussions on cardiovascular disease, cancer, emotional problems of menopause, hypertension, diabetes, arthritis, traumatic injuries; (6) The General Practitioner of the Year Award to be presented by AMA to an outstanding family doctor.

THE MAJORITY of American youth are opposed to socialized medicine. According to a recent nationwide survey conducted by the Gilbert Youth Research Company, 6 out of 10 youngsters wanted no part of government medicine. About 3 out of 10 believed that the government should pay for medical services. More girls than boys favored government medicine.

Most teenagers had sound reasons for voting against socialized medicine, although one youngster said "I'm against it because father is a doctor". High medical costs was offered as the most frequent reason by those favoring government medicine.

THERE IS ONE PHYSICIAN for every 760 persons in the United States, and one for every 1,000 in most European countries. In the Sudan, however, there is only one physician for every 81,000 of the population.

THREE COMPONENT MEDICAL SOCIETIES were represented at the recent AMA Public Relations Institute in Chicago. They were the Lynchburg Academy of Medicine, Norfolk County Medical Society and Richmond Academy of Medicine.

STATISTICS ON VA HOSPITAL OPERATIONS during fiscal and calendar years 1956 have been made available as the result of recent appropriation hearings on VA budget requests. The following information will do much to bring interested physicians up-to-date.

VA Patients—Fiscal Year 1956

Facility	*Admissions*	*Discharges*	*Average Daily Load*
Hospitals	485,508	483,351	110,205
Domiciliaries	38,113	38,548	17,047
Contract hospitals	31,947	28,910	3,253
State homes	8,072	8,060	8,793

	Average Daily Load	*Service-connected*	*Nonservice-connected*
NP hospitals	54,581	30,565-56%	24,016-44%
TB hospitals	7,757	1,947-25.1%	5,810-74.9%
GM&S hospitals	47,867	8,090-16.9%	39,777-83.1%
Total hospitals	110,205	40,602-36.8%	69,603-63.2%

It has been estimated that for fiscal year 1957, the service-connected load will decrease to 36.7% of the average daily patient load and in fiscal year 1958 to 36.6%. It was reported that in fiscal year 1955, 38.0% of VA patients were being treated for service-connected disabilities.

A NEW BOOK entitled "Rediscovering Capitalism" has just been published by the Princeton Panel, an organization composed of scholars, business and professional men. The Panel acts as a clearing house for authentic information on the role of capitalism in our country's economy, and the new book should be of particular interest to physicians.

THE FOURTH ANNUAL AMA CONFERENCE ON MENTAL HEALTH will be held at Chicago's Drake Hotel on November 22 and 23. Four discussion topics will cover: (1) The role of the general practitioner in relation to a specific psychiatric case; (2) Blue Cross-Blue Shield and other voluntary health insurance plans for the psychiatric patient; (3) Relationship of the psychiatrist in private practice to the general hospital in his community; (4) Psychiatric and related mental health problems in industry.

Mental Health . . . .

JAMES B. FUNKHOUSER

Seven and One Half Million Demons

An article which could have appeared (but undoubtedly did not) in an English Medical Journal in 1607.

Word has reached us that the Discovery, Susan Constant and God Speed, three good barques of the Virginia Company, have safely landed at Jamestown Island in the New World. God's name be praised!

It is likely that the good surgeons, Wilkinson and Wotton, who accompanied the adventurers, will have much to do. In addition to the bloody flux known to be common in that wild place, there are certain to be a number of pests and and other physical disorders which will demand their attention. Although witchcraft is slowly being stamped out in England and on the Continent, it would not be wise to discount the possibility that the New World will also be greatly infested with demons. We must remember that only a few years ago Dr. Weyer estimated that there were 7,405,926 demons in the world, divided into 72 companies, each headed by a captain. Certainly a new country, so little blessed by the offices of the church, will be fairly heavily infested. Although Reginald Scott, the Archbishop of York, has just stated his opinion that believers in witchcraft were "either children, fools, women, cowards or black melancholy discomposed wits", conservative church opinion such as Dr. Burton of Christ Church, Oxford, certainly ascribes many mental illnesses, such as lycanthropy and chorus sancti viti as "morbi daemoniaci". Certainly the most prominent psychiatrists of our time, Dr. Daniel Sennert of Witteinberg and Dr. Felix Plater of Basle are loath to discard the possibility that many functional disorders are due to devils.

We are told that young Professor Harvey, who is now working at Cambridge since his recent graduation from Padua, is nearly prepared to discard Galens humoral explanations of disease on the basis that the blood actually *circulates!* But he is a young man, and it is expected that his work is largely based on theoretical considerations. However, if his theory is accepted, it will cause much discomfort to those who advocate the heart as the center of the soul. Of course, it is now generally conceded that the stomach is the seat of reason.

Regardless of the disagreement of authorities as to the cause of madness, the physicians in the New World will have available all the modern methods for treating melancholia, whether it be due to demon infestation or to accumulations of bile. In either instance, purging or pukeing would be rational therapy. Dr. Burton advocates the use of white Hellebore for upward purging, and black Hellebore for downward purging. If these remedies fail, the physician can always fall back on the old standbys arsenic, antimony, borage, etc. If physical methods are preferred, there is good authority, both medical and ecclesiastical for starving, flogging and beating, since the demons are rendered so discomfortable that they will soon leave the body if the treatment is enthusiastically applied. If the afflicted person is incapable of withstanding heroic methods, they may be bled, cupped or blistered.

The writer does not feel that the present vogue of clysters will be more than a passing fancy in the treatment of melancholia, since the favorite site for incubi and sucubi, according to Plater, is in the stomach. Therefore, flushing the colon does not attack the problem directly.

We have recently read of a wonderful new remedy for phrensy or delirious mania which is composed of saffron, dried and beat to a powder. It is said that "if any person be troubled with too much watchfulness so that they cannot by any means take rest", that this wonderful drug will "provoke the party to sleep". At this point I might say that some enthusiasts for the new tranquilizer treatments are predicting that hospitals such as Bedlam (now celebrating its first centennial) will soon disappear, and that mental illness will soon be a thing of the past. If this is true, it will scarcely be necessary for the settlers into Virginia to make any provision for the hospitalization of people who are demented.

JAMES B. FUNKHOUSER, M.D., *Director of Training and Research, Department of Mental Hygiene and Hospitals, Richmond, Virginia.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

EDITOR'S NOTE: Grace Sherwood was ducked for witchcraft on Lynhaven Bay exactly 100 years after this fictitious article might have been written, and Williamsburg Asylum admitted its first patient 166 years later.)

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Diseases Resembling Poliomyelitis (Continued)

In the last notes on Public Health, attention was called to diseases resembling poliomyelitis. During the current summer such diseases have frequently been reported from all over the State with concentration in the Peninsula, Pittsylvania County, and around Roanoke.

In the early part of July the director of the Hampton-Warwick Health District reported that physicians in the area were seeing cases resembling nonparalytic poliomyelitis which did not seem typical of the disease. On the 16th of July, at the request of the health director, the director of the Bureau of Communicable Disease Control went to Newport News to consult with the health directors of these cities and to talk with some of the physicians who had reported cases. The story was that since the latter part of May, 29 patients in Hampton, 9 in Warwick, and 7 in Newport News had been admitted to hospitals with illnesses that followed the same pattern. In addition, 19 such cases had been reported to the State Department of Health from York County and 1 from James City County. The history of these cases is that the onset was sudden with headache, nausea and vomiting and stiffness of the neck. There was an elevation of temperature which ranged from 101 to 102 degrees while in a few cases it rose to 104 degrees. When spinal puncture was done there was indication of pressure and prompt relief of headache, nausea, and vomiting followed. The cell count was from 200 to 400 cells when the tap was made early in the illness and practically all cells were lymphocytes. When done later in the course of the illness, the count was greatly increased, 1,500 to 2,000 or more cells, and there were polymorphonuclears present in varying percentages. The protein was increased in all cases. Illness has been of short duration and self-limited. There has been no prostration either during the acute stage or after and there has been no residue. Multiple cases in the same household have been frequent and from these an indication of the incubation period has been obtained; it is probably 4 to 6 days, usually 4, and may be extended to 10 days. All ages have been affected; the case reports range from under 1 year to 44 years with the greatest incidence in the group 5-9. The distribution between males and females has been about equal. There have been many cases in addition to those who were hospitalized. The fact that the disease is scattered in the area leads to the conclusion that there is not a common vector and that the spread must be from person to person. Specimens of stools, spinal fluid, and blood have been sent to laboratories for viral studies.

About the end of July two cases were reported from Pittsylvania County and to date three additional cases have been reported. These patients were transferred to a Richmond hospital and specimens for viral studies were collected.

On August 6, the director of the Bureau of Communicable Disease Control with the director of the Virus Research Laboratory of the Medical College of Virginia, went to Roanoke to consult with the acting health director of that city regarding cases reported from hospitals there. Following a review of the cases and visits to the hospitals to study charts of patients, the public health group met with physicians of Roanoke who had been treating these cases. There was some variation from the pattern which prevailed in the Peninsula area. Patients had malaise for several days with some headache and then became better. After a day or two of improvement malaise developed again and headache became severe. At the same time pain in the neck with nuchal rigidity developed. The temperature shot up on the second day and reached 104 degrees in some cases. Nausea and vomiting often were present. In some cases a pain in the chest was noted. The duration of illness was usually four days but in some cases longer. Weakness and prostration have not been marked symptoms and no residue has been noted.

Lumbar puncture has not given relief from headache, nausea and vomiting in the Roanoke cases as in the Peninsula patients. Laboratory examination of the fluid has shown similar changes.

The consensus in both areas is that we have been dealing with a type of illness of viral origin, presenting symptoms similar to non-paralytic poliomyelitis, which should probably be diagnosed as viral or aseptic meningitis. Studies of similar outbreaks which have occurred in many states during the past several weeks indicate that epidemiologically they do not resemble poliomyelitis and laboratory studies have implicated non-polio viruses as etiologic agents.

Monthly Report of Bureau of Communicable Disease Control

	Aug. 1957	Aug. 1956	Jan.-Aug. 1957	Jan.-Aug. 1956
Brucellosis	1	3	18	16
Diphtheria		2	12	23
Hepatitis	42	28	328	338
Measles	109	154	4718	23451
Meningococcal Infections	5		53	59
Meningitis (Other)	114	17	320	88
Poliomyelitis	27	51	52	92
Rabies (In Animals)	27	16	236	228
Rocky Mt. Spotted Fever	6	17	28	38
Streptococcal Infections	324	255	4875	4169
Tularemia	4	1	23	17
Typhoid Fever	9	8	34	35

Preparation for Aging

Preparation for aging should begin in the "prime of life," according to a 72-year-old North Carolina physician.

Every doctor should try to train his middle-aged and even younger patients to cultivate proper habits of eating, sleeping, exercise, recreation, work, and mental hygiene, Dr. Wingate M. Johnson, Winston-Salem, said in the August 24th Journal of the American Medical Association.

His article on the relationship of the doctor to his aging patient is the first in a series on various aspects of aging, published under the auspices of the A.M.A. committee on aging.

Dr. Johnson, a member of the committee and a professor at Bowman-Gray School of Medicine, listed seven rules of conduct he devised for himself some years ago. These rules have helped some of his patients and friends grow old with a "reasonable degree of complacency." They are:

1. Recognize that the mind should be at its best when a person is about 40 years old and should continue to be efficient to the age of 70 or more. Organic changes in the brain do not necessarily parallel mental changes. The mind which is properly trained does not lose its elasticity, and constant use of the brain helps to keep it efficient.

2. Avoid becoming an "old fogy" by frequent association with young people. Prepare for occasional shocks, but try to understand youth's viewpoint.

3. Learn to delegate authority and to unload responsibility upon younger, more enthusiastic shoulders.

4. Cultivate wide interests. Learn new uses for hands and brain, and exchange more strenuous amusements for others less arduous.

5. Keep in touch with old friends and make new ones to avoid loneliness.

6. Cultivate equanimity—the mental poise that keeps one from being unduly elated or depressed. Keep a proper balance between emotion and reason.

7. Cultivate the habit of looking forward rather than backward.

Dr. Johnson noted that the doctor must help his older patient face his aging process. The oldster's attitude may be resentful, resigned or realistic. The doctor can help foster the correct attitude by being sympathetic, sincere, and sensible.

"Many of the most unpleasant traits of adolescence and old age have a common basis—the desire to belong. . . . The adolescent wants to achieve recognition as a useful member of society; the oldster wants to retain that recognition. The doctor can help the older patient's morale by showing a genuine interest in him and his environment." A doctor needs to be more than just a doctor to an aging patient; he must be "guide, philosopher, and friend."

Pre-Paid Medical Care. . . .

Edited by
RICHARD J. ACKART, M.D.

Dr. Frank L. Feierabend, a member of the American College of Surgeons, has long been active in the national affairs of the medical profession, as well as in those of his home state of Missouri. The positions of responsibility and leadership he has held are too numerous to list in this short introduction. It is germane, however, to mention that he is currently serving as President of the Kansas City, Missouri, Blue Shield Plan. Dr. Feierabend presented the following article before the Annual Conference of Blue Shield Plans, March 26, 1957, at San Francisco. I feel not only grateful but proud, too, that Dr. Feierabend has granted my request that his article be presented again here in this special section of the Monthly.

RJA.

Blue Shield and the Challenge of Changing Times.

Frank L. Feierabend, M.D.

When we consider the tremendous success of Blue Cross-Blue Shield during the past two decades, we may well wonder how the nation and the medical profession ever managed to get along without it. In the realm of politics alone Blue Cross-Blue Shield has brought about a decided change in the trend of events. I refer to socialization. History shows that socialization begins with medicine, and I am of the firm conviction that if it were not for Blue Cross-Blue Shield this country would have gone down the road of regimentation along with England and many other free countries that have succumbed to this form of state domination. Here in the United States the hospitals and the medical profession accepted the challenge of a great social problem. The threat of socialization in medicine here in our country has receded.

Lessened though it be, the threat of socialized medicine has not been eliminated. As an indicator of the growing interest in health legislation these figures[1] on bills introduced are illuminating:

250 measures, 1951-1952, 82nd Congress
407 measures, 1953-1954, 83rd Congress
571 measures, 1955-1956, 84th Congress

[1] From A.M.A. Washington Office, Special Report 85-3, March 7, 1957.

Today nearly one out of every four persons is eligible to receive at no cost to them some degree of medical care from the Federal Government.

The threat, therefore, remains, and we must rely upon Blue Cross-Blue Shield to do in the future what it has done in the past—give people the medical care they need at a cost they can afford to pay without any interference from the government.

The record speaks for itself; millions of people are covered by Blue Cross and Blue Shield. Such universal acceptance means that the answer the private hospitals and medical groups have provided for the social problem is both practical and altruistic. Blue Cross-Blue Shield is not just a plan to stave off socialized medicine. This is evident from the great good it does for those people who have participated in it—doctor, patient, and hospital alike. I repeat: *Blue Cross-Blue Shield is not a scheme: it is an answer.*

Looked at from this point of view, Blue Cross-Blue Shield is not a temporary thing. As an answer to a specific problem, it will remain in the sphere of events as long as the problem remains with us. This explains why certain opinions about Blue Cross-Blue Shield are entirely in error. One sometimes hears that the stresses of some years ago have disappeared, that the associated plans were an answer to a threat that no longer exists, that socialized medicine is no longer a possibility for America. The report of the American Medical Association shows that this is wrong, that the threat remains. I wish to dwell, however, on a fact that may elude us, namely, that Blue Cross-Blue Shield is a continuing answer to a continuing problem; that it provides the profession and the community with a method of solving a primary social problem of our time.

If I were to sum up the accomplishment briefly, I would say that Blue Shield is a cooperative effort by the medical profession to satisfy a public need and still retain the policy-making powers regarding medical practice. Such a program is fraught with difficulties, since it may not under any circumstances usurp the rights of doctors, dictate how medicine is to be practiced, set the fees for doctors' services, or establish rules for medical ethics. I say without fear of contradiction that Blue Shield has surmounted

these difficulties. In all matters of policy regarding the practice of medicine, including fee schedules, the doctors have made all the rules. I know of no Blue Shield plan in which the nonmedical personnel have made any policy affecting the practice of medicine notwithstanding what was said in San Francisco during the past year. It is very much worth our while today, in my opinion, to see just how this result has been accomplished.

In medical matters the doctor-patient relationship is of primary importance; it is a relationship almost unique with the medical profession and must be maintained in its entirety in any method dealing with the health problems of our time. In fact, if there is any one defect in socialized medicine that stands out above all others, it is this: socialized medicine, by introducing a third party, destroys the doctor-patient relationship. Good medicine cannot tolerate a distortion of the doctor-patient relationship, and it has been the task of Blue Cross-Blue Shield to prepare and operate a health-plan without any interference from a third party. The methods and principles whereby this task was accomplished are worthy of close examination, because they are typically American principles and methods, touchstones of our nation's greatness.

The historical development of our country is a story of free men in co-operation. The first settlers and the early western pioneers were the most rugged of individualists. They were dependent on no one, having the force of arms to preserve their lives against attack, the ability to clear their own land for planting, the strength of purpose to build a home in the wilderness. The pioneer women made the clothes, prepared the food, and helped with the planting. These were a self-sufficient people of the highest order, the freest of free men.

Time showed, however, that the pioneer, completely capable of providing the basic needs for himself and his family, desired things that can be had only in co-operation with others. He wanted a stable and dependable peace, and this meant that others, not he, must provide for the enforcement of law and the adjudication of disputes. He needed material advantages that factories can bring—the mass-produced goods that have characterized American living standards for the century past—and this meant that others, not he alone, would enter into the production-picture. He needed the cultural life that society brings in the form of educational and artistic opportunity, and this meant dependence upon others to provide for some of the necessary things, the things needed to make life human in all its phases. The fact that he was able to get these things, achieve this co-operation, without losing his fundamental liberty and freedom is one of the truly great accomplishments of history.

The Declaration of Independence gives us the fundamental basis for this tremendous success: "We believe all men to be created equal and endowed by their Creator with certain inalienable rights." Rights are God given. All stem from God—none from the state; governments receive their just powers from the consent of the governed. This same line of thought was carried out into legal arrangements by the American Constitution, especially in the Bill of Rights, that tells us of our freedoms—the things no man, no government, no authority may take from us —life, liberty, property, and all the rest of these fundamental things that make America what it is. If the nation was to develop, co-operation would have to be the order of the day of expansion, new arrangements would have to be made to meet those fundamental political, economic, and cultural needs we spoke of above. But all this was to be done in a framework of freedom. The pioneer did give up some of his early rights and freedoms; he was no longer a law unto himself. But he retained his fundamental rights, those inalienable powers to order the essentials of his living, those things that we call his *basic freedoms.*

In the development of those social and economic bodies so necessary for expanded living, our forefathers learned that in order to facilitate some activities, he must surrender part of his independence in the interest of the common good. While preserving basic freedom, the American way has shown that, in many respects, the rights of the common good must take precedence over the non-basic freedoms of the individual; we must surrender some of our independence of action in the interest of the common good. These are fundamental principles that always have been and always will be dependable beacons, helpful in guiding us to successful solutions of our problems. If we be guided by proven principles, success will be ours. If we neglect them, failure cannot be avoided.

As a doctor, I would like to maintain the old *status quo*—retain the old fee for service in each case, and have the transaction completed by my patient and by me. But this is impossible. Changing times have altered that plan. We have had to develop budget plans—Blue Cross and Blue Shield. Shifts in the overall economic system have forced

this upon us. Time marches on, and since changing times have forced alterations in our system of satisfying our human needs, we would be completely stupid if we did not accept the inevitable, work with it, and develop a plan which will permit us to exercise an element of control over it. Just as our forefathers had to work out a system of freedom and co-operation in the early development of our nation, so do we, the medical practitioners of modern America, have to work out a plan of co-operation without disturbing that basic freedom of ours, the doctor-patient relationship.

Blue Shield has accomplished this, and for this reason it merits and should receive the cooperation of the medical profession. It may be true that some phases of the system do not meet with universal approval, but the dissatisfaction is not with fundamentals. There is no third party in Blue Shield—the profession sets its own standards and rates. There is a rule of free men, of doctors by doctors of their own choosing, and all the democratic processes are preserved. This has been truly a masterpiece of co-operation in which the common good has been cared for without the loss in *basic* liberty. I say *basic liberty*, because, although we have had to sacrifice some of our independence (just as our forefathers, the pioneers did), we have escaped the third party and we determine our own destiny. This is no small thing, as witness the fate of medicine in Britain, where the state has, within the month, refused an income increase to the medical profession in the face of rising living expenses of the doctors and their families. We have our basic liberties under Blue Shield, and the independence we sacrifice to the common good in this instance is not a fundamental independence; *our basic rights* are preserved.

There is a moral principle running through our group relationships in America; it is a Christian principle of group conduct and a regulator of government-interference. The Declaration of Independence is an expression of it, and the mode of our historical development, where fundamental rights are retained while social progress is made, takes it for a guide. It is called by the philosophers, the Principle of Subsidiarity, and it may be summed up as follows:

> "When there is a social problem, the solution of that problem must be provided by a lower and better qualified group. If this group either cannot or will not provide the answer, it becomes the responsibility of the state to take over."

Distribution of medical care is a social problem. Making that care available to all who are not medically indigent, at a cost they can afford, on a budget basis, is our job. Relying on the philosophy of our forefathers, we meet the challenge ourselves, preserving our freedom, and keeping state interference to a minimum while promoting the common good.

Pictures Help Doctor

Visual education has moved into the doctor's office. Writing in the July 13th Journal of the American Medical Association, Dr. John B. Gregg, Sioux Falls, S.D., an otolaryngologist, told how he uses slide films to show patients exactly what is the matter with them.

He has found that interview time can be cut by one half by using pictures. In addition, pictures help the patient to better understand his ailments. In some cases pictures have helped convince patients of the need for operations and have helped allay needless fears.

He first used pictures torn from medical publications, but they were cumbersome and soon became tattered from use. He next used a hand slide viewer, but this was time consuming if more than one person looked at the slide. Now he projects the pictures on the wall. In an average office day, the slides are used two or three times.

Educating patients about medical problems is one of the duties of the doctor, but it is frequently neglected because it is so time consuming. The physician-patient relationship breaks down. By using visual education in the office, "greater understanding can be achieved in less time and with less effort."

Miscellaneous . . . .

Public Relations Institute

Your Chairman was again privileged to attend the Public Relations Institute as sponsored by Mr. Leo Brown and his very efficient organization. This is the fourth meeting which I have attended and I can assure you that each one has been a pleasure, a thrill and an inspiration in itself. Each year it has been greater than the year before and this year Leo Brown and his capable office spared nothing in making the 1957 Institute one long to be remembered.

Each year's Institute has had a local coloring background. One year it was a Western Range with a corral, one year it was an old-fashioned kitchen, concerning "What's Cooking", and this year the motif was an African Safari, with emphasis placed upon it being an expedition to track down new ideas and information.

On Wednesday morning, we got off to a good start, having coffee and hot rolls for an hour during which time there was registration. At 9:30 the meeting really got under way. Leading off the meeting were two panel discussions on medicine and publicity. On these panels were heard Mr. Roland Berg, of Look Magazine; Science Editor, John Troan of Pittsburgh, and Newsman Bob Clark of the Courier-Journal and Louisville Times. Speaking at this meeting we were privileged to hear Dr. W. W. Bauer, who gave an excellent talk on "Youth Fitness" and his ideas certainly gave a different slant on the usual figures which have been shown regarding the unfitness of youth concerning the draft.

In regard to press relations it was urged that the local societies should set up their own general rules regarding press relations. There was considerable discussion regarding the use of patient's names and pictures of patients and doctors in articles. It was the consensus of opinion that need for using names of patients or doctors vary with individual cases. It was the general opinion that the use of doctors names was the biggest gripe that they had to deal with. Their instruction to us was that there should be a uniformity of procedure and ethics. In other words, if it is all right to use a doctor's name and picture and the patient's name and picture in one county, it should be all right to use it elsewhere.

In quoting medical information concerning current subjects, it was their opinion that the doctor's name should be listed, because as they phrased it, "no doctor would read an article written by an unknown author concerning a medical subject." I mean, if an article appeared in a medical journal and there was no doctor's name attached to it, who would take time to read it; certainly we would not, so why should we expect the public to read an article that did not have the author's name written underneath the title.

They were of the opinion that they did not approve of executive sessions. Executive sessions, as you know, are not used by the A.M.A. In fact, the last one was used in 1948.

There was considerable discussion concerning the Asian, or Asiatic Flu and another name for it was Flu-man-chu. In regard to one question concerning the publicity of making headlines of suicides, it was the general opinion that suicides should be listed in the obituary and nowhere else in the paper. They did not even approve of listing attempted suicides.

The luncheon on Wednesday was an excellent one, regarding both the food and the speaker. The speaker was the now famous Kap Lambert, who played the leading role in the "Case of the Doubting Doctor". I hope that any medical society that has not had this picture shown to its members will shortly avail themselves of this opportunity. This film can be obtained by contacting our Executive Secretary, Bob Howard. Kap made an excellent after dinner speaker, his subject being "Tall Tales From Previous Trails". My only regret is that I could not make a recording of this talk because some of his jokes would certainly be a big help to anybody arranging subsequent medical programs.

The afternoon session was broken up into several groups concerning individual PR Problem solving sessions. These groups were Large Medical Societies, four or more A.M.A. delegates, small Medical Societies, less than four A.M.A. delegates; County Societies with Executive Secretaries, and County Societies without Executive Secretaries.

I thought that I could best learn information from the small state Societies of less than four A.M.A. delegates and attended this meeting. I am awfully glad that I did attend this meeting because it was there that I learned of the excellent theatrical ability of Bob Howard. In addition to this skit, there was an excellent presentation by Barrett A. Nelson, President of the Kansas Medical Society, as well as talks by Donald L. Taylor, Executive Secretary of

the Iowa State Medical Society, Oliver E. Ebel, Executive Secretary of Kansas Medical Society, and Milton D. Krueger, Executive Secretary of the Medical Association of Georgia. This skit showed how not to handle public relations and a medical meeting from the PR Standpoint, as well as the standpoint of treatment of the press and the releasing of news and articles for publication, presented at a medical meeting.

The attendance at this meeting was excellent. It was about 300 and has been steadily increasing during the past four meetings that I have attended. However, at all these meetings, I must admit that there is one part of the program that is best attended of all. That is the meeting at 5:30 P.M. on the first day. As I have said before, this meeting was based upon the actions of an African Safari and at 5:30 we met at the "Water Hole", in other words, the Walton Room where we were served superb cocktails, highballs and beverages of every sort. That night we were left to ourselves and Mr. Howard. Dr. Barney, of the Public Relations Committee of the Lynchburg Academy of Medicine, Dr. Taylor of the Norfolk Academy of Medicine and I went to Barney's Steak House where we thoroughly enjoyed a pleasant evening of solid food.

Thursday morning was a very memorable event. We began, after having coffee and rolls for an hour, with a report of Grievance Committee Re-evaluation Sessions. The first part of this program consisted of a re-enactment of three grievance committee activities. A grievance panel was selected, from the audience, of four doctors and two civilians, the civilians being press representatives or executive secretaries of the various medical societies. This consisted of a jury of six. After their selection a grievance case was presented by a member of the association. One of the cases selected was from a county level and two from a state society level. The representative of that particular society presented the case as presented at the meeting. The jury was supposed to discuss the case and its ramifications for about three minutes following which there was a foreman of the jury who presented his decision of the jury. Then this was compared with the decision as handed down by the original grievance committee. Following this the entire assembly was asked for a vote concerning their opinions. It was remarkable that of the three cases, on two occasions the entire group agreed overwhelmingly with the decision of the selected jury, as well as the jury of the original case. The one case where there was a difference of opinion of the group present from that decision handed down by the selected jury and the original jury was a case of fees and it is understandable how this variation could have been determined.

After a seventh inning stretch there was a final program for the morning by Edwin J. Holman, Staff Associate, Law Department, American Medical Association, then a discussion entitled "Covering the Legislative Scene" by Robert B. Throckmorton, Legal Counsel, Iowa State Medical Society and "Preventing Professional Liability Problems" by William M. Nebeker, M.D., Salt Lake City, Utah, and the final discussion "Fostering Better Doctor-Lawyer Cooperation", by Edward F. Willenborg, Executive Secretary, Academy of Medicine of Cincinnati.

Immediately at the conclusion of this session there was another delightful luncheon and at this luncheon there was a premiere showing of "Whitehall 4-1500", a new 30 minute color, sound film produced by the A.M.A. for the public, to explain the services and benefits provided by organized medicine.

Following this there was a showing of a 16 minute sound slidefilm on mechanical quakery prepared by the American Medical Association for medical societies, clubs and organizations.

I realize that this has been a rather sketchy and not thoroughly complete or adequate report of such an excellent meeting. It is only by actual attendance at these meetings that one can begin to comprehend the size, importance, magnitude and the efficient work of the Public Relations Department of the A.M.A. I sincerely urge every medical society to begin making plans next year to send at least one, if not two representatives, to the 1958 PR Institute which according to the past, will be held at the Hotel Drake the last few days in August and based upon my experience will be an experience that is equal by few and surpassed by none.

John Wyatt Davis, Jr., M.D.,
Chairman, Public Relations Committee
The Medical Society of Virginia

The World Medical Association

The following resolution, introduced by Dr. Percy L. Hopkins, on behalf of the Illinois State Medical Society, was adopted by the House of Delegates of the American Medical Association at its meeting in New York, June 3-7, 1957:

Whereas, The World Medical Association is the only international medical organization rep-

resenting the practicing profession in the fields of medical economics and medical education and devoted to protection of the freedom of the practice of medicine; and

Whereas, The United States Committee of W.M.A. was organized in 1948 to enable all American physicians to render support to the objectives of The World Medical Association and help improve the status of organized medicine internationally; and

Whereas, After 9 years only 5,000 U. S. physicians have become members of the U. S. Committee, although both the Association and the Committee are engaged in projects of vital interest to every American physician; and

Whereas, The House of Delegates of the A.M.A. at its Clinical Session in November 1956 declared: "It is difficult . . . to believe that any physician in the United States . . . is not a member of the (U.S. Committee) W.M.A. . . . Further expansion of the U.S. Committee will be necessary if the American viewpoint is to be continually and effectively presented by our spokesmen in The World Medical Association and, through them before other international bodies, to protect the interest and aims of medicine. . . . Surely physicians will wish to share in this international effort."; therefore be it

Resolved, That the House of Delegates of the American Medical Association reiterate its support of The World Medical Association and recommend that every member of the American Medical Association join the U.S. Committee of The World Medical Association; and be it further

Resolved, That the component state associations be urged to support and give official recognition to the state chairmen and subcommittees of the U.S. Committee in order to achieve the objectives of The World Medical Association in protecting the freedom of medical practice and increasing the influence of the practicing medical profession at the international level.

Prevents Neck Injuries

An automobile seat headrest is recommended as a way of preventing neck injuries when a car is struck from the rear.

Dr. Albert D. Ruedemann Jr., Detroit, said in the August 24th Journal of the American Medical Association that one of the more common auto accident injuries is the "whiplash injury." When a car is struck from the rear, it causes a forward movement of the body, followed by a rapid back-snapping of the head. This injures the neck.

These injuries are becoming more common because changes in seat construction to accommodate the new lower models have made back seats lower, allowing a greater area of the body to be above the top of the seat. In addition, expressways and super highways with congestions of traffic at entrances and exits make the "chain reaction accident" more common.

A headrest, six inches high and six inches wide, fitted on top of the present seat back will help prevent such injuries. The headrest is so constructed that it follows the line of the seat. This prevents the driver from resting his head on it during travel and becoming drowsy. However, it does support the head in case of an accident by preventing the backward movement of the head.

Dr. Ruedemann recommended that it be used in conjunction with a shoulder-type seat belt which reduces forward motion of the body.

The headrest is screwed to the seat frame and is removable. It can be made to match the car upholstery.

The Medical Society of Virginia . . . .

REPORTS FOR 1957 ANNUAL MEETING

Executive Secretary-Treasurer

The real value of a professional organization must necessarily be measured in terms of services to its members. Those who have been charged with directing the affairs of The Medical Society of Virginia—namely the President, members of Council and members of the House of Delegates—have subscribed to this philosophy and, consequently, the Society's activities have been planned with an eye toward achieving maximum benefits for its members in particular and the profession in general. It follows naturally that many activities which benefit the profession directly will also benefit the public indirectly. The Committee reports on the following pages provide graphic evidence to the truth of this statement.

Although the auditor's report is published each year immediately following the annual meeting, your staff believes it only right to discuss, from time to time, the Society's dues structure, financial position and policies. It is always gratifying to note that in these days of ascending costs, The Medical Society of Virginia has held steadfastly to the dues structure which was established in 1947. While the average state society requires dues of $55.00, Virginia operates with active membership dues of $25.00 ($15.00 for those in practice 5 years or less and $7.00 for associate members). This actually averages out to $19.36 per member. Annual expenditures average slightly over $16.00 per member which, at the present time, allows just the right margin to plan for emergencies and the proverbial "rainy day".

Your staff has always sought to achieve maximum results at minimum expense. The number of full time presonnel has been successfully reduced to four with the employment of part time assistance during peak load periods. Care is exercised in the purchase of equipment and supplies and a real effort is made to reduce waste to a minimum. The staff tries always to be conscious of the "little things" that save—letters instead of phone calls whenever possible, non-profit postage rates, elimination of window dressing, etc.

It should be pointed out that as membership increases, the number of personal services also increases. Thus, it is becoming necessary to use more part time assistance than formerly, and, of course, additional supplies are also needed. Then, too, the Society has taken an active part in such programs as Medicare, Selective Service, professional liability insurance, etc. All in all, however, the future of the Society has never appeared brighter.

Council: The regular mid-winter meeting of Council was held on February 13 and complete minutes may be found in the April issue of the Virginia Medical Monthly. A special meeting of Council took place on June 20 and minutes were published in the August issue of the Monthly.

Committees: Forty Committees (12 standing and 28 special) were active during the year. Twenty-seven Committee meetings were held at Society Headquarters—a new record. This would seem to indicate that our Committees are becoming more and more aware of state office facilities and services.

Component Societies: Eleven component societies were visited during the year. Five of the visits were in connection with the professional liability insurance program.

A new component society was chartered on June 20 and has been named the Portsmouth Academy of Medicine. This increases the number of component societies to 47.

Membership: It is indeed a pleasure to report that your Society continued to grow during 1956-57. Another goal was realized when the 2,700 level was reached. Although this figure is indeed gratifying, the officers and staff will not be satisfied until every eligible physician in Virginia is enjoying the benefits of membership. The membership story follows in detail:

Members reported August 31, 1956			2,630
New Members	154		
Reinstated	7		
		161	
Deaths	38		
Resignations	21		
Dropped	19		
		78	
Increase			83
Total membership as of August 31, 1957			2,713

American Medical Association Membership: You will be pleased to learn that The Medical Society of Virginia is now authorized three delegates to the American Medical Association. As this report goes to press, the Society can point to 2,091 members who belong to AMA. This represents an increase of 123 during the year.

Meetings and Conventions: The State Office was represented at both sessions of the AMA, the Medical Exhibitors Conference, AMA Public Relations Institute, AMA Regional Legislative Conference, Annual Meeting of the Southern Medical Association, and the Annual Meeting of the Virginia Academy of General Practice.

A number of special state meetings were attended, including the presentation of 4-H Club Rural Health Awards during a special session at VPI.

Selective Service: A revised Doctor Draft Law went into effect on July 1 and, as a result, the activities of the state and local voluntary advisory committees to Selective Service have been curtailed considerably. The Committees, however, have been requested to remain on a standby basis should the need for their further services arise. It is difficult to realize that the 35 man hours

formerly required of staff personnel each month can now be utilized for other purposes.

These Committees deserve a special vote of thanks for a service not only to the profession and the armed forces, but to every Virginia community. It has been a long assignment (7 years) and often a most difficult one.

WOMAN'S AUXILIARY: One of the most pleasant aspects of state office work is assisting the Woman's Auxiliary whenever possible. Two Board and a number of Committee meetings were held at Society Headquarters and all were well attended. Each year your staff becomes more impressed with the Auxiliary's various aims and projects, and it is hoped that you will give special attention to Mrs. Liggan's report.

VIRGINIA COUNCIL ON HEALTH AND MEDICAL CARE: Requests for placement assistance continue to be received at a steady rate, and 36 such requests were referred to the Virginia Council on Health and Medical Care. At least one of that number has been placed in a community needing his services.

The Medical Society of Virginia also worked with the Council in co-sponsoring a statewide conference on the shortage of nurses, which was held in Richmond. Similar conferences are planned for other areas of the State.

PERSONNEL: A study of office activities was conducted and resulted in a reassignment of duties and new distribution of work load. Miss Watkins, Miss Tobin and Mr. Smith have endorsed these changes enthusiastically and have worked hard to develop a smooth and cohesive administrative unit. They have most certainly earned a "well done" for their efforts.

The staff looks forward to the day when the Society will move into its new home. The improved facilities will enable the office personnel to serve you better and the expression "service to our members" will take on a new meaning.

ROBERT L. HOWARD
Executive Secretary-Treasurer

A.M.A. Delegates

A number of important matters were dealt with by the House of Delegates of the American Medical Association during its sessions in New York City from June 3-7. Although it is not feasible to cover every item brought before the House, your Delegates will endeavor to touch briefly on those considered most important. Bear in mind that the House considered 66 resolutions and many additional reports from the Board of Trustees and the various Committees and Councils.

The long discussed revision of the principles of medical ethics was approved and the membership is urged to study the final version which reads as follows:

"PREAMBLE

"These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

"*Section 1.*—The principle objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

"*Section 2.*—Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

"*Section 3.*—A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

"*Section 4.*—The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

"*Section 5.*—A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

"*Section 6.*—A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

"*Section 7.*—In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

"*Section 8.*—A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

"*Section 9.*—A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

"*Section 10.*—The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and well-being of the individual and the community."

The patient's right to free choice of physician was strongly reaffirmed when the House adopted the "Suggested guides to relationships between state and county medical societies and the United Mine Workers of America Welfare and Retirement Fund". It is understood that these guides are included in the report of the Liaison Committee to Confer with the United Mine Workers

Welfare Fund which appears elsewhere in these pages. Urging that the guides be used whenever possible, the House also recommended that the Board of Trustees look into the possibility of setting up similar guides for relations with other third party groups such as management and labor union plans.

Medicare came in for its share of consideration and three resolutions which can be expected to influence future negotiations were considered. One resolution condemned any payments under the program "to or on behalf of any resident, fellow, intern or other house officer in similar status who is participating in a training program." It was declared that Government sanction of such payments would give impetus to improper corporate practice of medicine by hospitals or other non-medical bodies.

The House also recommended that the decision on type of contract and whether or not a fee schedule is included in future contract negotiations should be left to individual state determination. The House restated the AMA contention that: the Dependent Medical Care Act as enacted by Congress does not require fixed fee schedules; the establishment of such schedules would be more expensive than permitting physicians to charge their normal fees, and fixed fee schedules would ultimately disrupt the economics of medical practice.

It was also suggested that the AMA attempt to have existing Medicare regulations amended to incorporate the Association's policy that the practice of anesthesiology, pathology, radiology and physical medicine constitute the practice of medicine, and that fees for services by physicians in these specialties should be paid to the physician rendering the services.

Social security for physicians was handed another setback when two resolutions favoring compulsory inclusion of physicians in the Federal Social Security system and another calling for a nationwide referendum of AMA members on the issue were rejected by the House. Delegates reaffirmed their opposition to compulsory coverage of physicians under the Old Age and Survivors Insurance provisions of the Social Security Act. They also recommended a strongly stepped up informational program of education which will reach every member of the Association, explaining the reasons underlying the position of the House. At the same time, the House reaffirmed its support of the Jenkins-Keogh Bills.

A new statement on medical schools was adopted to replace the "Essentials of an Acceptable Medical School", initially approved by the House of Delegates in 1910 and most recently revised in 1951. The new statement, entitled "Functions and Structure of a Modern Medical School", was adopted after a year of careful study by the Council on Medical Education and Hospitals in collaboration with the Association of American Medical Colleges.

The statement provides flexible guides which will "assist in attaining medical education of ever higher standards" and "serve as general but not specific criteria in the medical school accreditation program." The document encourages soundly conceived experimentations in medical education, and it discourages excessive concern with standardization.

In addition to the above, the House congratulated the Board and the Committee on Poliomyelitis for their prompt action in stimulating national interest in the polio immunization program;

Recommended further study and a progressive program of action, probably including legislation changes, to solve the problem of *narcotic addiction;*

Urged a more careful screening of television and radio patent medicine *advertisements;*

Directed the Board of Trustees to investigate the indiscriminate use of stimulants such as *amphetamine,* particularly in relation to athletic programs;

Commended the Law Department for its special report on *professional liability;*

Opposed the establishment of any further *veterans'* facilities for the care of non-service-connected illnesses of veterans, and

Condemned the compulsory assessment of medical men and staff members by hospitals in *fund-raising campaigns.*

Vincent W. Archer, M.D.
W. Linwood Ball, M.D.
Rufus Brittain, M.D.

Editorial Board

The Virginia Medical Monthly continued to increase in size and circulation during the past twelve months. The number of articles published and the advertising both necessitated extra pages. This has increased the cost of publication but this has been more than offset by the additional income from advertising.

The circulation of the Journal has reached 3,145 with copies directed to 44 states while 32 find their way to foreign countries.

Members of the Society are requested to send in as many news items as possible for this is probably the most widely read feature of the journal and the most difficult to maintain in terms of current happenings.

Harry J. Warthen, M.D., *Chairman*

Scientific Exhibits and Clinics

The scientific exhibit will this year feature the utmost in quality, an almost perfect location from the standpoint of convenience and a most attractive setting.

All arrangements on the local level have been handled by Dr. Wyman, who also served as a member of the Local Committee on Arrangements and acted as liaison between the Committee and ADD, Inc., the firm which is entrusted with the responsibility of booth erection, etc.

Awards will again be presented for (1) exhibits prepared by institutions, and (2) exhibits developed by individual physicians.

The Committee believes that an outstanding scientific exhibit has been arranged and strongly urges all members to spend as much time there as possible.

Frank M. Blanton, M.D., *Chairman*
Andrew F. Giesen, M.D.
Alvin C. Wyman, M.D.

Medical Service

The Medical Service Committee had one formal meeting during the year, on April 14, 1957. In addition, members of the Medical Service Committee have had meetings with a Committee of the VALC and with representatives of the specialties of pathology, radiology and anes-

thesiology, and with members of the State Insurance Commission. From the information gained at these conferences and the formal meeting, the Committee would like to give the following report and to include recommendations to the House of Delegates.

1. *Hospital-Physician Relationships*

After extensive study by the Medical Service Committee, together with representatives of the Anesthesiologists, Pathologists and Radiologists, and as suggested by our legal advisor, Mr. Duval, the following Statement of Principles was approved and their approval recommended to the House of Delegates.

STATEMENT OF PRINCIPLES

Furnishing medical care to the public is the joint duty of physicians and hospitals, and in the performance of that duty it is necessary and desirable that there be a clear and well defined division of responsibility between the professional staff and the hospital administration so that neither will encroach on the proper domain of the other. We believe that the following principles, fairly applied and conscientiously followed, will contribute to the smooth operation of this joint service.

1. Special services such as anesthesiology, pathology and radiology are integral parts of the practice of medicine, and physicians rendering such services should have the professional status of other members of the medical staff.

2. Services in hospitals in the fields of anesthesiology, pathology and radiology are the joint contribution of hospitals, physicians and technicians, as are similar services in other branches of medicine, but these services should be performed by or under the direction and supervision of a physician, and no hospital should control or interfere with the professional conduct and duties of the physician in charge of such services, or of the technicians under his supervision.

3. Facilities for x-ray and laboratory services may be owned and maintained by hospitals, and such hospitals should be adequately compensated for the use of these facilities. Compensation to the hospital may be in the form of (1) a rent or use charge paid by the physician or physicians operating or supervising the operation of the facility, (2) an equitable sharing by the physician and the hospital of the income from the facility, or (3) may be provided under any other contract which is mutually satisfactory to the physician and the hospital and which conforms to the principles set out in this Statement.

4. Hospitals maintaining radiological or pathological facilities may render bills to patients and others for the joint services furnished, but the bill or statement should show that the charge is for medical services, and the name of the physician furnishing or supervising such services should appear thereon.

5. Fees for services in the field of anesthesiology, radiology and pathology should be included in Blue Shield contracts rather than under Blue Cross coverage.

6. There should never be an employer-employee or master and servant relationship between a physician and a hospital.

7. We recognize and reaffirm Section 6 of Article VI of Chapter III of the Principles of Medical Ethics of the American Medical Association, which section is as follows:

> "Sec. 6. Purveyal of Medical Service—A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people."

This Statement of Principles is intended to set out in a general way a broad working basis for physicians and hospitals. It recognizes that the participation of each in the joint services rendered may vary under different conditions. It is not intended to prohibit or affect any existing arrangements under which professional incentive to the physician and progressive development of the hospital departments is preserved, and under which the independence of the physician in the treatment and care of his patients is recognized and safe-guarded.

In addition to the approved Statement of Principles, possible changes in the Medical Practice Act were studied and brought to the attention of the Sub-Committee of the VALC studying the problem of hospital-physician relationships. The members of that Committee will doubtless give these changes consideration in the preparation of its report.

The situation in Wise County where the United Mine Workers Health and Welfare Fund has denied payment to a hospital not approved by the Health and Welfare Fund for service to miners and their families, was discussed at some length. No conclusion was reached as to this problem which will continue to receive further study by the Committee.

As a matter of interest, the Committee offers the following excerpt from the report of the Secretary of the AMA, covering actions by the AMA House of Delegates:

Guides for Relations with UMWA Fund

In a key action on the basic issue of third-party intervention, as it affects the patient's free choice of physician and the physician's method of remuneration, the House adopted the "Suggested Guides to Relationships Between State and County Medical Societies and the United Mine Workers of America Welfare and Retirement Fund," which were submitted by the A.M.A. Committee on Medical Care for Industrial Workers. In approving the guides, the House also recommended that the Board of Trustees study the feasibility and possibility of setting up similar guides for relations with other third-party groups such as management and labor union plans.

The statement, which outlines both medical society and UMWA responsibilities, contains these "General Guides":

"1. All persons, including the beneficiaries of a third-party medical program such as the UMWA Fund, should have available to them good medical care and should be free to select their own physicians from among those willing and able to render such services.

"2. Free choice of physician and hospital by the patient should be preserved:

"a. Every physician duly licensed by the state to practice medicine and surgery should be assumed at the outset to be competent in the field in which he claims to be, unless considered otherwise by his peers.

"b. A physician should accept only such terms or conditions for dispensing his services as will insure his free and complete exercise of independent medical judgment and skill, insure the quality of medical care, and avoid the exploitation of his services for financial profit.

"c. The medical professional does not concede to a third-party such as the UMWA Welfare and Retirement Fund in a medical care program the prerogative of passing judgment on the treatment rendered by physicians, including the necessity of hospitalization, length of stay, and the like.

"3. A fee-for-service method of payment for physicians should be maintained except under unusual circumstances. These unusual circumstances shall be determined to exist only after a conference of the liaison committee and representatives of the Fund.

"4. The qualifications of physicians to be on the hospital staff and membership on the hospital staffs is to be determined solely by local hospital staffs and by local governing boards of hospitals."

During the discussions of the Committee it was pointed out that there has been some question as to whether a Medical Society, a component of the State Society, could deny membership to any licensed physician in its area. It was the consensus of the Committee that any Medical Society should be the sole judge of its membership. This position was concurred in by our legal advisor, Mr. Duval.

It was also brought out that a representative of hospital administrators would like to see the Medical Practice Act amended in such a way as to permit unrestricted employment by hospitals of physicians to render medical care to the public. The Committee strongly disapproved of any such proposed amendment.

A resolution was proposed by the Virginia Society of Pathology and passed by the Committee and is attached. In addition, the Secretary, Mr. Robert Howard, was instructed to write to the Virginia Society of Anesthesiology and the Virginia Radiological Society and ascertain whether or not their members wish to offer similar resolutions.

WHEREAS, Pathology has been recognized as an integral part of the practice of medicine by all authoritative organized medical associations, whether the pathologic services are rendered in or outside of a hospital, and

WHEREAS, such pathologic services can be performed only by or under the supervision of physicians, and

WHEREAS, The Medical Society of Virginia has contracted for the physicians of the Commonwealth of Virginia with the Department of Defense to supply medical services to dependents of the Uniformed Forces under Public Law 569 of the 84th Congress (otherwise known as the Dependents' Medical Care Act) and

WHEREAS, certification of medical services rendered can only be made by physicians,

BE IT THEREFORE RESOLVED that The Medical Society of Virginia hereby declares that Pathology is a medical service and that, under the terms of the contract which has been negotiated between the Medical Society and the Department of Defense and as set forth in Contract No. DA-49-007-MD-845, dated December 7, 1956, issued by the Department of Defense in compliance with the Dependents' Medical Care Act, fees for such services wherever rendered, are required to be paid to the physicians rendering the services.

2. A revised examination fee schedule, which had been requested by the United States Railroad Retirement Board was reviewed and approved by the Committee. This was returned to Dr. Joseph C. Read, who requested the schedule.

3. Pre-paid hospital insurance was discussed, particularly the problem of "substandard" or low return policies. It was suggested that a sub-committee of the Medical Service meet with the Insurance Commissioner of the State of Virginia to discuss the following possibilities:

(a) establishment of a clearing house by the Medical Society to receive all complaints concerning Health and Hospital Insurance either by doctors or by their patients; (b) that co-insurance or deductible insurance features in health and hospital insurance policies be made mandatory by the State Insurance Commission; (c) that consideration be given to multiple coverage of a patient by several insurance policies.

At this conference, the following points were brought out: (a) In regard to "substandard" hospitalization and health policies, the members of the Commission felt that these policies have a place in the Insurance field and that they should not be eliminated. However, there was no objection by the Commission for each physician to write to the Medical Society giving any case of hardship brought on by a "substandard" policy and at the end of a set time, if sufficient cases were found, the members of the Commission would be glad to go over the complaints. (b) The members of the Insurance Commission themselves felt that a deductible or co-insurance feature in all health and hospital policies would be very desirable and would tend to eliminate many of the abuses which now occur. (c) The members of the Commission thought that in cases in which a patient had two or more health policies, the physician should not be bound by any agreement with Blue Cross or other insurance companies to accept a minimum figure, but he could charge and receive his regular fee.

4. The Medical Service Committee recommends that The Medical Society of Virginia join the National Association of Blood Banks.

5. The report of the Sub-Committee on Rural Health follows:

Although there is little to report in the way of accomplishments, there has been some activity on the part of this Committee.

The grant of $500.00 by the State Society to be used for the purchase of Savings Bonds for prizes to 4-H Club contestants on health projects has been acknowledged.

Our Committee has been requested to present these prizes at the proper time. We are ready to do so. We would be in favor of continuing this policy another year, but, this time with the recommendation that, where practical, some representative from The Medical Society of Virginia have a part in judging these contests.

The Chairman of this Sub-Committee attended a workshop meeting called by the AMA Council on Rural Health on October 19 and 20, 1956, at Purdue University. He reported on the activity outlined in the preceding paragraph, and considerable favorable comment was expressed. Thirty-four states were represented and participated in round table discussion. Your chairman gathered that Virginia was well ahead of most states as relates to rural health. AMA suggestions more or less closely paralleled the type of activity already engaged in here by the Council on Health and Medical Care.

There is in current circulation in the Southern Planter a series of rural health articles recommended by the AMA Council. Dr. Paul Sanders, the Editor of the Southern Planter, had readily and graciously consented to run these articles without cost. This follows along the lines recommended by the AMA Council at the workshop meeting.

At the request of a lay committee from Tappahannock, we met on December 11, 1956, at Warsaw with a large group of practitioners from Essex County and the Northern Neck to discuss the advisability of a 50 bed, $850,000.00 general hospital to be established at Tappahannock. The lay committee had carefully studied the project and were now, apparently for the first time, consulting the medical opinion on the subject. It was the unanimous recommendation of the physicians that this be dropped as a Tappahannock project, and that suitable study be gotten under way on a similar project probably smaller, to be located in the Warsaw area. Your Chairman was in agreement with this and, in consequence and along with the local medical profession, is now more welcome in Warsaw than in Tappahannock.

At the request of Mr. Fisher of the Virginia Council on Health and Medical Care, your Chairman represented the State Society in assisting a lay group from Tangier Island to purchase equipment for a Medical Center there. The Center is now nearing completion. As usual with most of us it proved to be a pleasure to help spend other peoples money. Your Chairman was, however, surprised in promptly receiving a nice letter of appreciation from the Tangier group.

Feeling that the Salk Vaccine program for adults was lagging badly in Middlesex (his home county), your Chairman entered into an effort, jointly with the Middlesex County Junior Woman's Club and the other county physicians, to reach this group. The clinics thus held resulted in the administration of Salk Vaccine to 200 young adults, and thereafter a sharp upsurge in the number of Salk injections was noted in private practice. Feeling that this test run might warrant further effort, the project was outlined to the rural health committeemen, and they were requested to consider such a project as a committee activity in their areas. We are not yet ready to report further on this project, reports from the committeemen being as yet incomplete.

This brings this report up to date. We shall call a Committee meeting on the occasion of this year's State Society meeting. We also hope to contact at least some of the committeemen at the V.A.G.P. assembly in May. We sincerely trust that we may in the future be able to submit a report of more outstanding accomplishments on the part of this Committee.

(A. L. Van Name, Jr., M.D., Chairman)

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6. Although not brought up at the meeting of the entire Committee, it has been brought to the attention of the Chairman that it is the feeling of some physicians in parts of the State of Virginia, that there are inequities in the method of payment to physicians for welfare patients. It is the opinion of the Chairman that this problem should be gone into carefully either by the Medical Service Committee or by a Special Committee of the State Society and that a definite policy be worked out that can be adopted by the various component societies of The Medical Society of Virginia.

The Chairman wishes to take this opportunity to thank the members of the Committee and also the members of the various sub-committees and others who have given their time and thought to the many problems which have been considered during the past several years. It is felt that progress is being made slowly and that the best interest of the patient is still being held paramount by the physicians of the State.

The Chairman also wishes to thank Mr. Robert Howard and the members of the Staff of The Medical Society of Virginia for their great assistance during the past year.

Frank A. Farmer, M.D.
James P. Williams, M.D.
Arthur L. Van Name, Jr., M.D.
Richard E. Palmer, M.D.
William Johns, M.D.
Charles H. Lupton, M.D.
Charles L. Savage, M.D.
Snowden C. Hall, Jr., M.D.
H. B. Holsinger, M.D.
Russell Buxton, M.D., *Chairman*

Membership

The Committee on Membership of The Medical Society of Virginia has had no matters brought to its attention during the current year, and, consequently, no meetings have been held.

The Society has gained many new members during the year, and the Committee is pleased to extend them a most cordial welcome. Since the names of our new members have been published each month, we shall not repeat them at this time.

We are delighted to have the honor of presenting the name of our retiring President, Dr. James D. Hagood, for honorary membership in The Medical Society of Virginia, and take this opportunity to extend our congratulations on his outstanding record.

Alfred P. Jones, M.D., *Chairman*
Acors W. Thompson, M.D.
Cecil B. Dixon, M.D.

Ethics

There have been no matters referred to the Committee which required a meeting.

M. H. Harris, M.D., *Chairman*

Judicial

A number of changes in the Constitution and By-Laws have been proposed to the Judicial Committee with the request that they be prepared in proper form and published in the Virginia Medical Monthly for information and to comply with Article XIII of the Constitution. Unless otherwise stated the Committee makes no recommendations as to the wisdom or desirability of the proposed changes, matters of policy being for the House of Delegates.

The following amendment to the Constitution has been proposed:

Amend Article VIII to read as follows:

"Article VIII—Standing Committees and Editorial Board

The Standing Committees of the Society shall be (1) Scientific Exhibits and Clinics, (2) Legislation, (3) Medical Service, (4) Membership, (5) Ethics, (6) Judicial, (7) Public Relations, (8) Mediation, (9) Program, and (10) Finance. There shall be an Editorial Board for the official publication of the Society, which board shall be considered as one of the standing committees of the Society."

The purpose of this amendment is to eliminate the Committee on Post-graduate Education as one of the standing committees of the Society. If this amendment to the Constitution is adopted, then the following consequential changes in the By-Laws should be made:

Amend the first and second unnumbered paragraphs of Article IX of the By-Laws to read as follows:

"The Standing Committees of the Society shall consist of an Editorial Board for the official publication of the Society, and additional Committees as follows:

(1) Scientific Exhibits and Clinics.
(2) Legislation.
(3) Medical Service.
(4) Membership.
(5) Ethics.
(6) Judicial.
(7) Public Relations.
(8) Mediation.
(9) Program.
(10) Finance.

Each of these Committees with the exception of the Committees on Medical Service, Legislation, Public Relations, Mediation and Finance shall consist of three members, whose term of office shall be three years. Successors to the members who have first been appointed for one, two and three years shall be appointed for three years by the incoming President who shall also name the chairman of each Committee."

Strike out the third unnumbered paragraph.

Retain the balance of the Article.

The following additional amendments to the By-Laws of the Society have been proposed in writing and will be presented to the House of Delegates for adoption or rejection at the next annual meeting:

Article V.

Section 2. Add the following as a new paragraph at the end of Section 2:

"In the event a member of a component society, authorized to vote therein, is also a member of another component society, in which he is authorized to vote, he may vote for members of the House of Delegates and be a candidate for election to the House of Delegates, only in the society established in the territorial area in which he resides; and in the numerical apportionment of membership in the House of Delegates, he shall not be counted as a member of any component society except the one established in the territorial area of his residence."

(The purpose of this amendment is to recognize membership in more than one society, and at the same time to limit the voting rights and the rights of representation of individuals who are members of more than one society.)

Article V.

Add the following as a new Section 13 at the end of the Article:

"Section 13. If in the opinion of the Council a special meeting of the House of Delegates is necessary or advisable, such meeting may be called by the Council. Written notice stating the place, day and hour of the meeting and the purpose or purposes for which the meeting is called shall be given not less than ten nor more than fifty days before the date of the meeting, either personally or by mail, by or at the direction of the President or Secretary, to each member of the House of Delegates serving or who was authorized to serve at the last regular meeting of the House of Delegates. In the event any such member has died or otherwise become ineligible to serve, then another member may be elected or appointed to serve in his stead. At any such special meeting the House of Delegates so constituted shall have the same power and authority as to the matters for which the meeting was called as if meeting in annual session."

(The purpose of this amendment is to authorize special meetings of the House of Delegates at the call of the Council, and to provide how such meetings shall be called and held.)

At the last meeting of the House of Delegates consideration was given to a proposed amendment to Section 2 of Article V of the By-Laws which would have deleted from the section the alternate method of electing delegates provided by the words "or, in its discretion, a component society may elect one delegate and one alternate from each county and each city in its territorial area." After some discussion a motion was adopted referring the matter to an appropriate committee for consideration and report at the next session, and the President designated this Committee to study the problem and make the required report. The Judicial Committee is of the opinion that the alternate method in the present By-Laws serves a useful purpose and should be retained. It, therefore, recommends that the proposed amendment be not adopted.

However, if the House of Delegates is of the opinion that the alternate method should be eliminated, then this Committee submits the following as an appropriate amendment for the purpose:

Article V, Section 2.

Change the first sentence of Section 2 to read as follows:

"Section 2. Each component society may elect annually to membership in the House of Delegates, one delegate and one alternate for each thirty-five (35) or major fraction thereof of its members who are members of The Medical Society of Virginia; but in any event each component society is entitled to at least one delegate and one alternate in the House of Delegates."

(Retain the remainder of the Section.)

J. Morrison Hutcheson, M.D., *Chairman*
Richard P. Bell, Jr., M.D.
Hugh G. Stokes, Jr., M.D.

Public Relations

The 1956-57 public relations program of The Medical Society of Virginia followed the pattern of the previous year, and your Committee is pleased to report that once again good results were obtained from this conservative approach to the public relations problem.

The Committee continued to work with as many radio stations as possible, and, at the present time, 16 stations are participating in our program. These stations have used 1,196 transcriptions during the year, and certainly deserve our appreciation for contributing so much valuable public service time.

There was only one large area of the State not covered by these broadcasts and that was the far southwest. In order to correct this situation, Mr. Smith will shortly visit 10 stations in that area and seek to enlist their aid in bringing the voice of the profession to our westernmost citizens.

During the first half of the year, Welcome Wagons across the State continued to cooperate with the Committee by distributing material to newcomers urging that they obtain a family physician and acquainting them with medical progress and objectives. Unfortunately, it has become necessary to temporarily discontinue this phase of the program until the supply of material can be replenished. A number of the pamphlets used were obtained from the American Medical Association, and their stock is now exhausted. The Committee, however, has every reason to believe that Welcome Wagons will soon again be greeting newcomers with helpful advice and suggestions from the Society. It could very well be that family health record cards will be next on the distribution list, and with this thought in mind, the Committee has ordered a substantial supply from the AMA.

Within the very near future, a meeting is planned to study the advisability and possibility of presenting special "Senior Class Day" programs for senior medical students. This is a project in which your Committee has long been interested, and which, judging from results in several of our western states, is most worthwhile. The program would cover such important subjects as medical ethics, legal aspects of the practice of medicine, public relations, prepaid medical insurance, business side of medicine, civic responsibilities, etc. New members would also be urged to attend.

The State Office continued to serve as a clearing house for public relations and other types of literature of interest to the profession. Approximately 55,000 pamphlets, books, stuffers, etc., were mailed during the year.

A special folder kit was designed for new members and has been in use for the past 12 months. It represents another effort to acquaint new members with Society activities, objectives and facilities.

Your Committee would like to take this opportunity to congratulate the Committee on Rural Health for its work with the 4-H Clubs. Dr. Van Name's Committee represented the Society during the presentation of 4-H Club Health awards and did a splendid job. This marked the first time that The Medical Society of Virginia had sponsored the health project awards, and we cannot think of a more worthwhile project. This is truly public relations at its best.

The State Office once again worked with medical assistants whenever possible, and programs featuring public relations and other subjects were presented in Lynchburg, Charlottesville, Petersburg and Richmond. It has often been said that next to the physician, the medical assistant is the most important single public relations factor.

Your Chairman attended the AMA Public Relations Institute in Chicago and was pleased to note that two component societies were represented. He can but wonder, however, why more component societies do not send representatives. It seems quite clear that if the public relations problems of the profession are ever to be solved in a manner satisfactory to all, it is necessary that every physician and every Society join in a concerted effort directed toward that end.

John Wyatt Davis, Jr., M.D., *Chairman*
Mason C. Andrews, M.D.
Harry C. Bates, Jr., M.D.
Ira L. Hancock, M.D.
Harry B. Stone, Jr., M.D.
W. T. Thompson, M.D.

Mediation

The Mediation Committee of The Medical Society of Virginia has had a number of cases referred for consideration during the year. There seems to be developing a rather definite pattern of complaint received by the Committee. They relate to a variety of conditions but apparently have their origin in careless, thoughtless remarks made by the attending or other physicians who lack appreciation of the ignorance of the public in medical matters. Consequently, they are disturbed and misled by their lack of appreciation and misunderstanding of the facts. It seems that we as physicians have in our possession the means of preventing most, if not all, of the grievances which arise.

Only one meeting was held by the Committee during the year. That meeting was for the purpose of considering a case which was satisfactorily adjusted. All other matters were handled by correspondence, not all successfully, but the nature of the complaint would not seem to justify a meeting of the full committee.

Your Committee suggests that more and perhaps different publicity should be given to the existence and policies of the Mediation Committee in order that the public may be better informed of its nature and functions.

John T. T. Hundley, M.D., *Chairman*
James L. Hamner, M.D.
Vincent W. Archer, M.D.
Carrington Williams, M.D.
James P. King, M.D.

Cancer

The Cancer Committee this year has been concerned chiefly with standardizing a method of reporting. An adopted form was used for annual reports that proved to be satisfactory in many ways but some revision is in-

dicated. Representatives of the Committee participated in meetings with the professional service committee of the Virginia Division of the American Cancer Society in which a method of reporting to the Cancer Society was studied.

The Committee recommends recertification of the following Tumor Clinics for the coming year:

1) McCluer Tumor Clinic, Alexandria
2) Arlington Hospital Tumor Clinc, Arlington
3) Kings Mountain Tumor Clinic, Bristol
4) McIntire Tumor Clinic, Charlottesville
5) C & O Tumor Clinic, Clifton Forge
6) Memorial Hospital Tumor Clinic, Danville
7) Lynchburg Tumor Clinic, Lynchburg
8) Eastern Shore Tumor Clinic, Nassawadox
9) DePaul Hospital Tumor Clinic, Norfolk
10) Norfolk General Tumor Clinic, Norfolk
11) Riverside Hospital Tumor Clinic, Newport News
12) Wise County Tumor Clinic, Norton
13) Portsmouth Tumor Clinic, Portsmouth
14) Clinch Valley Tumor Clinic, Richlands
15) Medical College Tumor Clinic, Richmond
16) Lewis-Gale Hospital Tumor Clinic, Roanoke
17) Memorial Hospital Tumor Clinic, Roanoke
18) Jefferson Hospital Tumor Clinic, Roanoke

At our final meeting to be held just prior to the Annual Meeting it is planned to investigate further the activities of one of the Tumor Clinics and to restudy the problem of reporting to the various agencies involved in Cancer work.

John R. Kight, M.D., *Chairman*
George Cooper, Jr., M.D.
William D. Dolan, Jr., M.D.
Joseph W. Houck, M.D.
Carrington Williams, Jr., M.D.
John W. Hooker, M.D.
Hugh H. Trout, Jr., M.D.
G. J. Carroll, M.D.
William N. Thornton, Jr., M.D.

Child Health

A meeting of the Committee on Child Health of The Medical Society of Virginia was held at Society Headquarters on August 1. Attending were Dr. Paul Hogg, Chairman, Dr. W. E. Chapin, Dr. W. N. Thompson, Dr. Harry Cox, Dr. Robert Cox, Dr. Gayle Arnold, Dr. A. Page Booker and Dr. Boyd Payne.

Dr. Hogg opened the meeting by reviewing the Committee's recommendations of last year and reporting the various "follow through" actions. In this connection, he reported that a meeting had been held with Dr. Mack I. Shanholtz to discuss ways and means of modifying the law requiring use of prophylactic silver nitrate solution in the eyes of newborn infants. It was suggested during that meeting that the two medical schools establish research programs on the subject and submit their findings to the Department of Health. If the findings were conclusive Dr. Shanholtz stated that he would go before the General Assembly with the request that the law be modified. Both medical schools were contacted following the meeting with Dr. Shanholtz, but no progress reports have been received thus far. Dr. Booker was requested to consult with Dr. McLemore Birdsong at the University and Dr. Arnold was asked to consult Dr. Lee Sutton at the Medical College of Virginia.

Dr. Hogg also reported that Dr. Shanholtz had been consulted on the question of deleting the word "mask" from the maternal hospital law. It was understood that Dr. Shanholtz will do everything possible to carry out the Committee's recommendation.

It was then reported that the Virginia Chapter of the American Academy of Pediatrics had appointed a committee on the fetus and the newborn. The committee will report its efforts to the Committee on Child Health which will in turn transmit all information, recommendations, etc., to The Medical Society of Virginia. It was mentioned that, in all probability, local committees will be set up to work with local health departments, hospitals, obstetricians, etc., in solving problems of the newborn. Progress must necessarily be slow since a great deal of diplomacy must be exercised when approaching local hospital staffs, etc.

Dr. Chapin informed the Committee that Virginia is now enjoying its lowest infant mortality rate (29.7 per 1,000). However, he stated that little progress had been made in lowering the mortality rate of those under one day.

The proposed modification of birth certificate forms was discussed by Dr. Robert Cox. He advised the Committee that he was not too optimistic concerning the possibility of bringing about the recommended change.

There followed a discussion concerning the need of better educating parents on child care. It was brought out that while certain laws can be used as levers to encourage parents to inoculate their children against polio, etc., the best answer seems to be arousing and maintaining the parents' interest.

A question was then raised with reference to recommended procedures for typhoid boosters. It was reported that conflicting information has been circulated and that, apparently, local health departments over the state are not always in agreement. It was the consensus that every effort should be made to standardize such information disseminated by the various departments.

School health programs were then discussed by the Committee and it was reported that the Virginia Chapter of the American Academy of Pediatrics will soon appoint a Committee to work on these problems. It was generally agreed that perhaps the Committee on Child Health should move slowly in this regard until the American Academy of Pediatrics has had the opportunity to make some recommendations. It was also agreed that many phases of school health are quite controversial and require the most careful study and consideration.

Paul Hogg, M.D., *Chairman*

Conservation of Sight

The Committee on Conservation of Sight has had no problems referred to it and it has not met. However, the Chairman has been working on a set of suggestions for the administration of oxygen to premature infants in an effort to eliminate the development of retrolental fibroplasia in the eyes of such babies. It is now well proven that this devastating condition develops as the result of being subjected to too high a concentration of oxygen and that with proper control of oxygen, the disease can be eliminated. This list of suggestions is now essentially complete and it will soon be sent to all hospitals in the

state to be posted in their nurseries where such a list does not already exist.

W. Wickham Taylor, M.D., *Chairman*

Liaison with the Department of Public Welfare

Your Committee first met with the Department of Welfare January 24, 1957, representing the Department of Welfare with Col. Richard W. Copeland, Director, Dr. Robert A. Abernathy, Mrs. Virginia P. Jones, Mrs. Eula Jane Armstrong, Mr. John L. Bruner and Mr. W. L. Painter.

Most of the time in the first meeting was taken up in briefing the Committee on the many types of services rendered for the indigents in the counties throughout the State of Virginia. Some of our counties have not even one doctor and have to depend on doctors in neighboring counties to look after their population. Others have no facilities for treatment of indigents so they are required to send patients some distance to a hospital. Frequently, money of the localities is inadequate, even to match it with the State's, so there is overmatching and undermatching, depending upon the financial status of the individual county.

We next discussed the Medical Report Form which is used by the Department of Welfare and Institutions to ascertain the status of a patient requesting permanent and total disability for gainful occupation. Several members of the Committee worked on this form and it was revised several times and finally presented in a form which seemed to be agreeable to all those concerned.

The third item of the meeting was discussion of the Medical Care Programs under Public Assistance. Medical Care is defined officially as follows:

> "Medical care for public assistance recipients is defined as including medical, surgical, dental and nursing services in the home, office, hospital, clinic, or other suitable place, provided or prescribed by persons authorized by State law to give such services; such services to include drugs and medical supplies, appliances, laboratory, diagnostic and therapeutic services; nursing home and convalescent care, and such other medical services and supplies as may be prescribed by such authorized persons. (In-patient care in a general hospital is not included in this definition as medical care.)

It seems that in order for Virginia to be eligible for Federal funds to assist in medical care of indigent patients, certain criteria are demanded by the Federal Government, one of which is a uniformity of methods of payment throughout the State. It was brought out that Virginia now receives between $400,000 and $500,000 from the Federal Government for indigent care. It was also brought out that it is possible for money payments to be made to indigents for medical care without any assurance that the money will be so spent by the client. Dr. Mulholland brought out the seriousness of the effect of the state and local hospital program upon the teaching of medical students. He pointed out that indigent patients have been used from the beginning of medical education for teaching medical students and there is some danger that too much local paid medical assistance has, and might further, affect the number of patients reaching the two medical schools.

The second meeting occurred June 13, 1957, at the office of the Department of Welfare and Institutions. There was a thorough discussion of the draft report on the medical care of indigent persons. A comprehensive study had been made of the indigent need of this State and it was brought out that in the first four initial programs, that is, The Old Age Assistance, The Aid to Dependent Children, The Aid to Permanently and Totally Disabled and The Aid to the Blind that about 75% of the money was Federal money, about 16% of the money was State money and about 9% local money. It was brought out that the money payment to recipients of various services had been changed by the Federal Law of 1950 and by the State Law of 1956 to make sure that more of the money was channelled through what is known as "Vendor Payment" thus controlling the expenditure more effectively. We learned that the "floor" upon which subsistence was based for single, inactive male or female is only $68.90 per month. This includes food, clothing, personal care and housing. This means that the maximum subsistence given to people in this category for these services is only $68.90 per month.

Other interesting facts brought out was that optometrists and chiropractors are eligible in this state to participate under the remuneration for vendor's services.

We also discussed the payment of physicians for patients hospitalized as indigents by the State. It was the consensus of the physicians on the Committee that the matter should be very carefully considered and it was pointed out that physicians from time immemorial have always looked after the poor and needy without remuneration, and that we saw no reason to change that position at this time. It was again pointed out by Dr. Mulholland that if patients were hospitalized in smaller hospitals throughout the State, and physicians paid to look after them, the number of patients coming to the medical schools would be seriously reduced and thereby seriously impair the teaching program in these institutions.

It would seem wise that this matter of payment by the Welfare Department to the physicians in the State for the care of indigent patients be referred to the Council and to the House of Delegates of The Medical Society of Virginia at this next meeting and that the Society should establish thereby a policy which could be interpreted to the Department of Welfare.

The members of the Committee felt that much more study should be made before we could come to any conclusion about fee schedules to be set up by the Department of Welfare and Institutions for medical service. It was felt that this trend toward further medical coverage for indigent patients followed the national trends toward socialization of medical service and, hence, should be approached with caution. We appreciate the position of the Department of Welfare and Institutions and found their problem a difficult one to solve and we believe by continued conversation such as we have had with them, that a solution which is agreeable and mutually satisfactory to both the State of Virginia and the Medical Profession can be, and should be, worked out. It is hoped that a further meeting can be held prior to the meeting of The Medical Society of Virginia in late October so that a definite policy can be requested by the Department

of Welfare and Institutions and then acted upon by the House of Delegates at the annual meeting.

MALCOLM H. HARRIS, M.D., *Chairman*
G. B. SETZLER, M.D.
A. L. CARSON, JR., M.D.
H. B. MULHOLLAND, M.D.
JOHN P. LYNCH, M.D.
KINLOCH NELSON, M.D.

Walter Reed Commission

A little over two years ago, the Walter Reed Commission began to try to find a way to have "Belroi", the birthplace of Dr. Walter Reed, taken care of in a satisfactory manner and to relieve The Medical Society of Virginia of the responsibility.

It is, therefore, the recommendation of this Commisto Council that "Belroi" be leased to the Walter Reed Improvement Betterment League of Gloucester, Virginia, with certain restrictions which were to be included in the lease. The lease was prepared and signed by members of the Commission for The Medical Society of Virginia in the spring of 1957. However, it is now learned that the Walter Reed Community Betterment League has rejected this plan so that we are now right back where we were before.

It is, therefore, the recommendation of this Commission that the matter be returned to the Council of The Medical Society of Virginia with the suggestion that the Walter Reed Commission be given sufficient funds for the repair and upkeep of the property.

RAYMOND S. BROWN, M.D.
JOHN R. GILL, M.D.
RICHARD B. BOWLES, M.D., *Chairman*

To Confer with the United Mine Workers Welfare Fund

The Liaison Committee has not been called on to attend an area meeting of the states during the last year. The last one was held in May of 1956 in Charleston, West Virginia.

Since the formation of this Committee in 1952, the State Committee was not called on for any questions until during the past year when, due to the fact that one of the hospitals in Virginia was cut off from benefits of the UMWS Fund on April 1, 1957, after having been approved by the Joint Commission on Hospital Accreditation, the hospital called on this Committee for help in deciding why they had been removed from the approved list of the UMWA Fund.

A meeting was held on May 24, 1957, in Roanoke with all members of the Committee present. After hearing the complaints of the above mentioned hospital, which were very illuminating, the area medical director of the UMWA had nothing to say and it was decided that we would carry on and ask for more specific complaints and an explanation for action which had been taken.

Another meeting of the Committee was held in Richmond on July 22, in which it was decided, after much discussion, that a Medical Audit Committee be appointed composed of Dr. W. C. Caudill, Pearisburg, Dr. Stuart Catron, Abingdon, and Dr. Kinloch Nelson, Richmond, to go to Norton and review the hospital status and see if this could be settled on a state basis.

This meeting in Richmond was also held to discuss the action of the House of Delegates of the A. M. A. which was held in New York in June at which time a guide was drawn up to aid the medical societies and also establish Fund responsibilities in carrying out this program. The following is a copy of this guide.

Medical Society Responsibilities:

1. The members of the medical profession have the responsibility for rendering good medical care to all people, including beneficiaries of the UMWA Welfare and Retirement Fund.
2. Each local medical society, in light of the needs of the community, should develop a mechanism for supplying the Fund Area Medical Administrator with the names of physicians desiring to participate in the Fund's medical care program, indicating the field in which each physician wishes to practice.
3. The medical society should create active liaison committees with periodic and established times for meetings. Medical societies should appoint physicians on these committees who are interested in the problems and willing to devote time to them.
4. The liaison committees should be established on a county, regional, or state level as may be necessary. Local problems should be handled locally and, if not resolved there, referred to successively higher levels until they have been resolved.
5. The liaison committee should be charged with the prompt and energetic handling of any problem presented to it which has to do with relationships or dealings between the medical profession and the Fund. Success in the implementation of these Suggested Guides depends in a large part upon the performance society should institute, through the liaison commit-
6. To protect the Fund and its beneficiaries, the medical society should institute, through the liaison committee, measures to correct any confirmed abuses called to its attention.
7. A medical society and a liaison committee should not engage in unilateral action in any matter which affects the relationships between the medical profession and the Fund without prior consultation with the Fund representatives.
8. When an agreement is drawn up between a medical society and the Fund, it should include a provision which would permit any portion(s) to be referred to higher levels without nullifying the entire agreement.
9. All controversial matters arising between the UMWA Welfare and Retirement Fund and the participating physicians which cannot be reconciled at the local or state level should be promptly referred to the Committee on Medical Care for Industrial Workers. This appeal mechanism is available to any party concerned.

Fund Responsibilities:

1. The Fund should keep statistical data on medical care provided to the beneficiaries by the physicians. The Fund should present to the liaison committee any claims such as poor medical care, overcharges, and unnecessary surgery, with substantiating evidence.
2. The Fund should utilize the medical society liaison committees on medical questions relating to the operation of the program. Success in the implementation of these Suggested Guides depends largely upon the utilization of the liaison committees.
3. Representatives of the Fund should not engage in unilateral action in any matter which affects the relationships between the Fund and the medical profession without prior consultation with the liaison committee.
4. Every physician duly licensed by the state to practice

medicine and surgery should be assumed at the outset to be competent in the field in which he claims to be, unless considered otherwise by his peers.

5. When an agreement is drawn up between a medical society and the Fund, it should include a provision which would permit any portion(s) to be referred to higher levels without nullifying the entire agreement.
6. All controversial matters arising between the UMWA Welfare and Retirement Fund and the participating physicians which cannot be reconciled at the local or state level should be promptly referred to the Committee on Medical Care for Industrial Workers. This appeal mechanism is available to any party concerned.

We in the State feel that due to the fact there are only six counties in the coal producing area, that we do not need a county liaison committee and that the State Liaison Committee would be able to handle all the problems for this area. Furthermore, we believe that a working agreement should be worked out with the Area Medical Director and the Liaison Committee from the actions of this guide which was produced in the House of Delegates of the A. M. A.

James P. Williams, M.D., *Chairman*
H. B. Mulholland, M.D.
Thomas Hunter, M.D.
Mack I. Shanholtz, M.D.
John O. Boyd, M.D.
William B. Barton, M.D.
Rufus Brittain, M.D.
William F. Maloney, M.D.
Kinloch Nelson, M.D.

Blue Shield Relationships

At a meeting of Council on February 13, 1957, at The Medical Society of Virginia Headquarters, Dr. Benjamin W. Rawles, Jr., a member of Council and President of the Virginia Medical Service Association, advised that the Richmond Blue Shield Plan was anxious to cooperate with the Society in furthering good relationships with physicians. Dr. Rawles suggested that the Society accept the proffered invitation to nominate a certain number of physicians to the Board of Directors of the Richmond Blue Shield Plan.

A motion was made that the President appoint a special committee to serve with a similar committee of the Richmond Blue Shield Plan to discuss this suggestion. An amendment was offered which would have the committee work with all State Blue Shield plans. The motion as amended was adopted.

In response to Dr. Rawles' observation and motion that was subsequently passed, President Dr. James Hagood appointed a special committee of The Medical Society of Virginia to work toward better Blue Shield-Physician relationships. Members of this special committee appointed by Dr. Hagood were: Dr. Carl W. Meador, Richmond; Dr. Charles M. Caravati, Richmond; Dr. William H. Barney, Lynchburg; Dr. Reverdy H. Jones, Jr., Roanoke; Dr. Harold W. Miller, Woodstock—Chairman. Due to a very busy schedule and previous commitments, Dr. Caravati regretfully found it necessary to decline acceptance of the appointment.

This special committee, known as the Liaison Committee of The Medical Society of Virginia, was charged with the responsibility of seeking ways and means whereby more harmony and better relationships between the physicians and Blue Shield would become a reality.

A review of the record of actions previously taken by the House of Delegates of The Medical Society of Virginia brings into clear focus the following observations: (1) That the Blue Shield Plan is the Doctor's Plan; (2) That the principle of a pre-payment plan for medical services would be a step in the right direction in preventing Socialized Medicine; (3) That the Plan was not perfect and it would have to be improved over the years as unforeseen problems and difficulties arose; (4) That a spirit of cooperation and tolerance and understanding and even sacrifice would not only be desirable but necessary during the difficult and trying times that are almost certain to be encountered during the developmental period.

Our committee feels that it would be proper at this time and in this manner to pay tribute to the fine work that has been done by those charged with the responsibility of administering Virginia Medical Service Association, the Plan inaugurated by the Society, and also the Roanoke Plan. Their problems have been complicated and are becoming more difficult and acute. Currently the Medicare Program with its larger fee schedule is recognized as the cause of some dissatisfaction with Blue Shields' payments to physicians.

The Liaison Committee has met twice with duly appointed representatives of the Board of Directors of Virginia Medical Service Association and with Mr. Leonard O. Key, Executive Director of Surgical Care, Inc., of Roanoke, and his committee. The object of these meetings was to find in what way our Committee could work with Virginia Medical Service Association of Richmond and with Surgical Care, Inc., of Roanoke in establishing more harmony and better relationships between the physicians and the two Blue Shield Plans.

A factual survey is of interest. There are approximately 3,300 physicians in Virginia, 2,700 of whom are members of The Medical Society of Virginia. The Virginia Medical Service Association services 68 counties and has 1,520 participating physicians, approximately 75% of the physicians practicing in the area. Arlington County and Alexandria City are not included within the area served by Virginia Medical Service Association; they are serviced by the Washington, D. C. Blue Shield Plan. Surgical Care Inc. of Roanoke services 26 counties and has 446 participating physicians, which number does not include some of the physicians in the southwest area, which is serviced by one of the West Virginia Plans. It is estimated by the Roanoke group that there are between 700 and 800 physicians practicing in the counties serviced by Surgical Care, Inc.

At our meetings with the Virginia Medical Service Association and Surgical Care, Inc. it was pointed out that those who are charged with the responsibility of administering the plans are working with the physicians in an endeavor to remove as rapidly as possible the causes for lack of harmony and dissatisfaction among the physicians and at the same time, remain solvent. Dr. Richard J. Ackart, Executive Director of the Virginia Medical Service Association of Richmond, pointed out that he and Board members of the Richmond Plan are meeting with committees of each specialty group to obtain

their criticisms and suggestions as to how the Virginia Medical Service Association can better serve physicians and their patients. Thus far meetings have been held with nine of the specialty groups and a second meeting with the Virginia Surgical Society's Council is scheduled for September. Dr. Ackart reported that the meetings have been harmonious and much mutual good has been derived from these meetings.

The Liaison Committee feels that this is an important step in the right direction and at the same time will serve to bring about better relationships between the physicians and the Blue Shield Plans and it is hoped that as a result of these meetings that more of the non-participating physicians will become participating physicians.

The Board of Directors of Virginia Medical Service Association feels very strongly that since the Blue Shield Plan is the Doctor's Plan, that a more active sponsorship by The Medical Society of Virginia would be very helpful and has requested that the Society appoint a certain number of physicians to the Virginia Medical Service Association Board, the appointments to be made by the Council of The Medical Society of Virginia subject to the approval of the House of Delegates. It was suggested that the Council of The Medical Society of Virginia with the approval of the House of Delegates appoint twelve physicians to the Board. These appointments would constitute the active sponsorship of the Plan by the Society which is deemed mutually desirable. It was felt also that the Council-appointed physician members of the Board as representatives of the Society, should make a report to the Council once or twice yearly.

In the light of the data obtained from a survey of one of the Districts and meetings with the Virginia Medical Service Association and Surgical Care, Inc. of Roanoke, the Liaison Committee feels it proper to make the following general recommendations:

(1) That those who are charged with the responsibility of administering the Blue Shield Plans, continue their meetings with the specialty groups in an endeavor to arrive at an understanding that will be mutually advantageous to physicians, patients and plan.

(2) That the Blue Shield Plans be more actively sponsored by The Medical Society of Virginia officially and by participating physicians, personally.

(3) That the participating physicians cooperate in every way possible with those having the difficult job of servicing the Plan for us. There will be times when we will be called to manifest a spirit of tolerance, understanding and sacrifice.

(4) That more of the non-participating physicians try to see their way clear to becoming participating physicians, remembering that the Plan is our Plan and is the best Plan thus far to take care of the low income group of patients. Our Blue Shield Plan is undoubtedly the most potent weapon that the physicians have in the fight against Socialized Medicine. We should do everything in our power to keep the Plan solvent and make the Plan strong.

(5) That the request of the Board of Virginia Medical Service Association that twelve of the physician members of the Board be appointed by Council with the approval of the House of Delegates, be complied with.

CARL W. MEADOR, M.D.
WILLIAM H. BARNEY, M.D.
REVERDY H. JONES, JR., M.D.
HAROLD W. MILLER, M.D., *Chairman*

Mental Hygiene

Two meetings of the Mental Hygiene Committee were held, the first on March 19, 1957, and the second on June 25, 1957.

It is regretted that due to illness the Chairman of the Mental Hygiene Committee was prevented from attending the Third Annual Conference of Mental Health Representatives of the State Medical Associations. Dr. Leo H. Bartemeier, the Chairman of the Council on Mental Health of the American Medical Association, has been most cooperative in furnishing the Mental Hygiene Committee with informative literature and valuable suggestions. Our committee has secured a place on the program of the annual meeting of The Medical Society of Virginia. Dr. Lea Bartemeier has accepted our invitation to address this meeting on October 30 at 10 a. m., his subject being Specific Suggestions for the Care of Patients Suffering from Emotional Disorders.

During our first meeting it was the unanimous opinion that the Sub-committee on Alcoholism should assume the status of a separate and distinct committee. It was voted to recommend to the President of The Medical Society of Virginia that a Committee on Alcoholism be appointed as soon as possible. The chairman was later notified that a committee was appointed by the president.

Two items were of major interest to the Mental Hygiene Committee, namely, adequate Blue Cross and Blue Shield coverage for psychiatric conditions and proper care of psychiatric cases in nursing homes throughout the State of Virginia.

The Executive Director of the Virginia Hospital Service Association met with our committee, and a detailed discussion with him of Blue Cross and Blue Shield coverage of psychiatric patients was informative and encouraging. The Roanoke office of Blue Cross-Blue Shield was also contacted.

After discussion and correspondence with the officials of these organizations, it appears that the prospects are encouraging for eventual coverage of psychiatric conditions on the same basis as medical conditions. We were advised that it may be possible to increase during 1958 the ten-day limit on psychiatric hospitalization under the Richmond Blue Cross to perhaps twenty or thirty days.

The Roanoke Blue Cross for some time has had no limit under the full coverage days for psychiatric conditions in a general hospital, no distinction being made between psychiatric, medical and surgical coverage. They are hopeful that their new contract will also provide for nervous and mental conditions up to seventy days in special institutions for such care for any one case. The Roanoke organization excludes alcoholic and drug addiction cases, while the Richmond Blue Cross does include alcoholism for ten days. The Roanoke officials indicated the hope that alcoholism and drug addiction might be included some time in the future, but there are no immediate plans for this.

The Roanoke Blue Shield plan, however, does not provide general medical care fees, theirs being limited to surgery, orthopedics and obstetrics. Thus there appears to be no discrimination against the psychiatric patient in the Roanoke Blue Shield, since it does not cover medical fees either.

The Richmond Blue Shield is hopeful that some time in 1958 electroshock therapy in the hospital will provide a physician a fee of $10.00 per treatment up to a maximum plan payment of $150.00 per contract year.

The Mental Hygiene Committee is concerned that provision for psychiatric cases under the Medicare Program is quite inadequate. We urge The Medical Society of Virginia to look into this matter and use whatever resources possible to bring about a change in this situation.

It is the feeling of the committee that there is a need for closer supervision of nursing homes, especially those having psychiatric patients.

Dr. David M. Wayne, a member of the Mental Hygiene Committee in 1956, made an interesting and comprehensive survey of nursing homes in the State of Virginia. In his survey he found that approximately 35 per cent of patients in nursing homes had mental infirmities and one-third of the patients were in need of psychiatric supervision.

It was brought out that the Medical Service Committee of The Medical Society of Virginia had been interested in this subject for a number of years and had held meetings with representatives of the State Department of Health and the Virginia Nursing Home Association. It was the consensus that the Mental Hygiene Committee should offer assistance to the Medical Service Committee and also offer psychiatric advice to the State Department of Health.

The Committee feels that any institution, hospital or home for the care and treatment of the mentally ill, epileptic, mentally deficient persons, or persons addicted to the intemperate use of narcotic drugs, alcohol or other stimulants should be licensed and adequately inspected from a psychiatric standpoint. We hope this can be brought to the attention of the Virginia Advisory Legislative Council which at present is studying statutes and problems referring to the care of the mentally ill.

A representative of the Virginia Advisory Legislative Council met with the Committee and gave a report on some of the proposed changes in laws pertaining to the commitment of mentally ill patients, as well as other laws pertaining to this type of patient.

The Mental Hygiene Committee would like to recommend:

1. That the question of restoration of driver's license without penalty for the patients who have been treated for mental or emotional illness be given favorable consideration.
2. That medical facilities in general hospitals be the places of custody for mental or emotional illness pending transfer to a psychiatric hospital.

The Council on Mental Health of the American Medical Association is strongly urging that a mental hygiene committee be formed in the Woman's Auxiliary of the State Medical Societies and that the chairman of their committee be invited to sit in as a permanent guest member at each of the meetings of the Mental Hygiene Committee. We hope this can be carried out, because it is felt that such a liaison would help not only the Woman's Auxiliary program but would be of extreme help to us in getting our own goals accomplished.

The Committee would like to recommend and urge the further study and consideration of the problem of professional education to widen the profession's understanding of problems relating to mental hygiene. We hope this will take a high place in any future mental hygiene program.

The use of tranquilizing drugs by physicians in general practice has increased to a considerable extent, and it is felt by some that they may be used excessively in occasional instances. It is felt wise to issue a note of caution, realizing that these drugs have not been in use long and that careful observation should be made as to the appearance of side effects.

The state hospitals are using these tranquilizing drugs extensively, but because of the high cost and unavailable funds they have not been able to furnish them for more than a brief period to patients who have left the hospital. It is hoped that some means can be worked out so that such medicine will be furnished to the indigent. The sending of clinical reports to physicians and treatment-recommendations to the family physician on release of a patient from a mental hospital are to be encouraged, and to a limited extent this is being done now by our mental hospitals.

The Chairman wishes to express to the remainder of this committee and to Mr. Robert I. Howard, Executive Secretary-Treasurer of The Medical Society of Virginia, his appreciation for their cooperation and assistance in the formulation of this report.

J. Rudolph Saunders, M.D., *Chairman*
Joseph R. Blalock, M.D.
Thomas S. Edwards, M.D.
John T. T. Hundley, M.D.
R. Coleman Longan, Jr., M.D.
John B. McKee, M.D.
G. Edmund Stone, M.D.

Conservation of Hearing

Your committee on the conservation of hearing is proud to report substantial activity in this field during the past year. Under the able direction of Drs. Peter Pastore and G. S. Fitz-Hugh, the Departments of Otology in Virginia's two medical schools have conducted a broad program of detecting and treating hearing disorders. With the acquisition of a mobile unit, the Virginia Hearing Foundation, under the leadership of Dr. Fletcher Woodward and the University of Virginia Speech and Hearing Clinic (Dr. James Mullendore, Director) has conducted an extended study of hearing defects in school children of Virginia, especially in rural areas.

The Medical College of Virginia Hearing Center (S. James Cutler, Audiologist) has not only provided services to over three thousand patients in all areas of audiology, but also has opened a pre-school class for deaf children and a group adult program of lip reading instruction.

In the Eastern part of the State the Kiwanis Club of Portsmouth has sponsored a workshop for those children found deficient in hearing and speech. In Norfolk work is progressing toward the establishment of a Speech and

Hearing Center to broaden the present efforts in detecting hearing problems in the school population.

Your committee has encouraged a program of training teachers and clinicians in hearing problems and establishing centers for the testing and treating of hearing disorders. There is need in the state of a program of fundamental research in Otology. It is heart warming to hear of the enthusiasm marking the activity in the conservation of hearing with increased vigor each year.

Francis H. McGovern, M.D., *Chairman*
Cary N. Moon, Jr., M.D.
Gordon Harrell, M.D.
Fletcher D. Woodward, M.D.
Neil Callahan, M.D.
James R. Gorman, M.D.
Cal T. Burton, M.D.

National Legislation

This committee has worked very closely with the Washington Office of the A.M.A. The A.M.A. Office screens *all* bills introduced in Congress for possible medical implications. It is surprising how many such "mousetraps" are hidden in the maze of bills, amendments, riders, etc. The Washington Office keeps your committee informed concerning these bills.

Your committee chairman in turn notifies the other members of the committee (one in each Congressional District), and they in turn contact their legislators.

This seems to be working quite well in informing both doctors and legislators. This is important for in many instances a superficial reading of proposed legislation will not reveal the possible consequences of which the legislators would really like to be informed. With the great mass of bills introduced it is impossible for our Senators and Representatives to study each one in detail, hence, it is up to us to keep them informed. The cooperation of the members of The Medical Society of Virginia is earnestly requested when they are called on for help.

Vincent W. Archer, M.D., *Chairman*

National Emergency Medical Service

We are pleased to report considerable progress in our efforts to prepare the state and the medical and allied professions for service should disaster occur. This was evidenced in the prompt mobilization of forces last February when Southwest Virginia was flooded. Civil Defense workers, the local and state health departments, and private physicians and nurses responded immediately and soon had the situation well in hand, including immunization against typhoid.

A full-time public health nurse is now assigned to the office of Civil Defense and covers the entire state. Three excellent conferences for nurses have been held with a total attendance of about 1053, on mass care of casualties as regards nursing. This same nurse has, with the cooperation of the Home Demonstration agents, instituted conferences for non-professional women, at which time they study Home Protective Exercises.

All local health directors now have definite plans for disaster preparedness, and a manual is being compiled which should be a good source of reference should disaster occur. Certain classes in sanitation and sanitary engineering are still being given at the Robert P. Taft Sanitary Engineering Center in Cincinnati by the U. S. Public Health Service.

There are at present four complete 200-bed emergency hospitals in the state with sites for three more to be approved. The present four are located at Winchester, Roanoke, Charlottesville and Richmond. There are 107 First Aid Stations on hand and 15 on order. We have 45 tons of replacement medical supplies in the Richmond Quartermaster Depot and a like amount at the Cheatham Annex, Naval Mine Depot in Yorktown. F.C.D.A. has stockpiled medical equipment and supplies to last three weeks and take care of three and a half million casualties.

A detailed study of evacuation of the critical target areas of the District of Columbia and Hampton Roads is under way and plans are being made to care for approximately 750,000 to 1,000,000 evacuees.

Although there is much to be done, particularly in the support areas which comprise the greater part of the state, we feel gratified with the years accomplishments.

W. Ross Southward, Jr., M.D., *Chairman*
Thomas Smith, M.D.
Walter P. Adams, M.D.
E. Cato Drash, M.D.
James L. Hamner, M.D.
Alexander McCausland, M.D.

Advisory to Woman's Auxiliary

This committee, as always, has been ready to help with any of the problems presented to it from the Auxiliary.

Your chairman and vice-chairman have had several meetings with members of the executive committee. This has been mainly for the purpose of helping to re-arrange their budget. In addition, we have been asked to approve several new projects.

Your chairman was privileged to attend their board meeting. He was impressed with the reports from the component groups. Each member of The Medical Society of Virginia should realize just what is being done by the Auxiliary, and should in every way uphold and encourage them in the valuable work they are doing for good medicine in our State.

It is a real privilege to work with this group.

Charles L. Outland, M.D., *Chairman*
Donald S. Daniel, M.D.
William V. Rucker, M.D.
Paul C. Pearson, M.D.

Advisory Heart

Our Committee has had no problems presented to it and has had no meetings and, hence, has no report for this year.

Reno R. Porter, M.D., *Chairman*
C. D. Nofsinger, M.D.
Julian R. Beckwith, M.D.
George B. Craddock, M.D.
Walter Nalls, M.D.

Tuberculosis

The Committee has not met formally this year, primarily due to the fact that the State Legislature did not meet and there was no Tuberculosis Legislation pending.

The Committee has served in an advisory capacity for several projects of the Virginia Trudeau Society with

particular reference to case fact finding studies and death certificate reports of tuberculosis.

William H. Barney, M.D., *Chairman*
William E. Apperson, M.D.
L. R. Broome, M.D.
Thomas Hunnicutt, Jr., M.D.
John A. Sims, M.D.

Venereal Disease Control

At the request of this committee, the Venereal Disease Control Program of the Virginia State Department of Health undertook a survey and study of the venereal disease problem in an attempt to more clearly delineate its current status and establish guide posts for continued effort in eventually bringing about a maintained control of these infections.

The first problem facing those engaged in this activity was to determine as nearly as possible the accuracy of morbidity reporting in presenting the actual incidence and prevalence of the diseases. It was assumed that all public health clinics were reporting all infections coming under their observation. The factor needed to be determined in this problem was how complete was the reporting by private physicians. A schedule was designed and the month of July 1956 was selected for attempting to ascertain this information. During the month of June 1956, survey schedules were sent to all physicians, hospitals, clinics, and institutions in the State of Virginia. These survey schedules constituted a request for the physician to list all persons seen during the month of July 1956 who had a venereal disease. Enough information was requested to determine duration of the disease and for nonduplications. Reports were returned from 75% of the physicians and hospitals and 100% of the clinics and institutions. The tabulated results, with no attempt to compensate for the 25% of the physicians and hospitals who failed to return the forms, indicated that 43% of the syphilitic infections seen by all four of these responsible sources were not reported through the regular legally established morbidity reporting systems, and that 85% of gonorrhea infections seen were not reported.

Assuming this discrepancy between infections reported and those actually seen by physicians, hospitals, etc., the prevalence rate for Virginia for the month of July 1956 would be 127.2 cases per 100,000 population, rather than 87.6 as reported through established morbidity reporting procedures. This same application to the gonorrheal infections would change the rate from the reported 183.6 to 356.4 per 100,000 population.

Originally, the survey and study were planned to show a comparison between the month of July 1955 and July 1956, and such a tabulation gives us the following:

Rates Per 100,000 Population

Syphilis

Reported Morbidity		*Adjusted Morbidity*
July 1955	106.8	145.2
July 1956	87.6	127.2

Gonorrhea

Reported Morbidity		*Adjusted Morbidity*
July 1955	224.4	352.8
July 1956	183.6	356.4

This tabulation indicates that there was a real decrease in syphilitic infections, but that there was a real increase in gonorrheal infections, although, the reported rate decreased more than did the reported rate of syphilitic infections. If we applied the adaptation to the July 1957 figures, we would show a considerable increase of the rate per population unit in both diseases, but, perhaps the routine morbidity reporting has improved since the survey.

What is the venereal disease problem in Virginia in 1957? During the six-month period ending June 30, 1957, we have experienced a 30% increase of verified lesion syphilis over the two prior six-month periods. This increase is largely due to several small epidemics in three widely separated areas of the State—Franklin, Greensville, and Arlington-Fairfax Counties. These three chains of infection have already led to 37 cases of lesion syphilis and 20 cases of early latent syphilis. Epidemiology has been thwarted in several instances by lateness of report and unwillingness to permit interviewing by trained public health personnel. Either the attack rate of syphilis has been pushed down to the level where it may remain stationary with slight fluctuations or our complacency resulting in less appropriations and program has haltered our march to complete control, or even eventual eradication. For the past three fiscal years, the rate per population unit of lesion syphilis has remained fairly static.

If only 15% of the diagnosed cases of gonorrhea seen in private practice have been reported as indicated by the survey study, how many cases have been treated without diagnosis? The total number of gonorrheal infections reported has been continually decreasing since fiscal year 1946, but there were still 743 cases of diagnosed gonorrhea reported during the one month of July 1957. For fiscal 1956-57 there were 800 cases of reported early syphilis and 6,751 cases of reported gonorrhea in the State of Virginia.

Thomas W. Murrell, Jr., M.D., *Chairman*
James W. Love, M.D.
Edward P. Cawley, M.D.
O. H. McClung, M.D.
Jethro H. Irby, M.D.

Medicare Advisory

Your Medicare Advisory Committee has had three meetings since its inception and has considered 70 cases, 62 of which have been completed to the satisfaction of the physician and patient concerned. However, due to insufficient information, it has been impossible to complete some claims, which are now pending.

The physician must realize that the fees scheduled in "Medicare Schedules of Fees" are the maximums and the physician is not obligated to charge these fees. The physician should charge his regular fee.

When the charge for treatment is not listed in "Medicare Fees", your voucher is referred to the Committee for consideration. We attempt to find similar or comparable operations or treatment in "Medicare Fee Schedule" and attempt to reach an agreeable settlement on this basis.

We trust you will help us, and in any unusual operation or treatment, send us a letter of explanation to enable the

Committee to handle your claim to an earlier conclusion.

W. Linwood Ball, M.D., *Chairman*
Guy W. Horsley, M.D.
Hunter B. Frischkorn, Jr., M.D.
Mason C. Andrews, M.D.
Fletcher J. Wright, Jr., M.D

Maternal Health

The Committee on Maternal Health met at the Rotunda Club in the Jefferson Hotel, Richmond, July 31, 1957, with Dr. A. Tyree Finch presiding. All members were present.

Dr. Finch stated that Dr. Betty Whitehead and Dr. Cary Whitehead accepted an invitation to appear before the Committee to state their reasons for wishing to have changes made in the Maternity Hospital Law.

The secretary brought to the attention of the Committee that the Attorney General's office was not able to render an opinion in regard to the interpretation of the Maternity Hospital Law as it is written. Drs. Finch, Ware and Shamburger were appointed as a committee to meet with Mr. Duval, Lawyer, State Medical Society, for the purpose of restating the present law for clarification. The report of the conference will then be presented to the Committee on Maternal Health for further consideration.

On motion of Dr. Groseclose, seconded by Dr. Ware, the following statement was unanimously approved: The Maternal Health Committee of The Medical Society of Virginia approves that all facilities in the State of Virginia in which obstetrical deliveries occur should be governed by all the rules and regulations and meet all the standards of the State Maternity Hospital Law in order that the standards of obstetrical practice in the State of Virginia will be maintained at the present high level and be improved in the future. The present Maternity Hospital Law, in the opinion of this Committee, should be clarified to meet the above objective.

The program for the section on obstetrics and gynecology for the State Medical Society meeting in Washington, D. C., in October was reviewed. Drs. Finch, Latven, Groseclose, Hurt and Dunne will be members of a panel for the presentation of maternal mortality cases at the meeting. The panel will meet at breakfast on the day of the program to complete the final arrangements. Four cases were chosen for possible use by the panel. Each member of the panel is to have a copy of each case to be presented. The suggestion was made that each committee member be prepared for discussion of the case from the floor.

Following the luncheon hour the cases of maternal deaths were reviewed. Four slides are to be used at the State meeting showing: (1) Maternal death rate for the State through the years 1928-1956. (2) The total deliveries and deliveries in hospitals, 1936-1956. (3) Percentage deliveries by physicians and by midwives, 1936-1956. (4) Deaths from puerperal, sepsis, toxemia and hemorrhage, 1931-1956.

Dr. Finch suggested that the Committee members consider changes in the classification now used for maternal deaths particularly regarding the responsibility of the physician, patient and/or community.

Mason C. Andrews, M.D.

Garrett Dalton, M.D.
James J. Dunne, M.D.
E. S. Groseclose, M.D.
W. J. Hagood, M.D.
George S. Hurt, M.D.
K. Charles Latven, M.D.
Walter L. McMann, M.D.
L. L. Shamburger, M.D.
W. N. Thornton, M.D.
H. H. Ware, Jr., M.D.
A. Tyree Finch, M.D., *Chairman*

American Medical Education Foundation

While it is a bit early to predict just how successful our 1957 campaign will be, your Committee can report that a definite improvement was shown in 1956. This can be attributed to the excellent ground work done by last year's Committee and also an improved reporting procedure adopted by Foundation officials. It is now possible to secure an accurate breakdown on physicians who contributed directly through the American Medical Education Foundation and those who routed their contributions through their alumni associations.

During 1956, 722 Virginia physicians contributed a total of $29,044.96 to our medical schools, and even though we are proud of this achievement, it still falls short of our goal. Your Committee wishes to point out that our two Virginia medical schools received grants last year from the Foundation and the National Fund for Medical Education totaling $97,510.50.

Your Chairman attended the AMEF Annual Meeting of State Committee Chairmen in Chicago and received a behind the scenes look at the tremendous battle being waged to keep our medical schools free. A complete report was made to the President of the Society and members of the Committee.

This is a continuing battle, and if we are to successfully prevent government encroachment in the field of medical education, it is necessary that *each* member of The Medical Society of Virginia do his part. Your contribution is needed now!

Robert Keeling, M.D., *Chairman*

House

Your House Committee is pleased to report that the appropriation of $2,100.00 for maintenance of the Headquarters Building during the current year has not been exceeded and $897.39 remains unexpended after subtracting the $1,210.00 contributed by the three organizations which share office space with The Medical Society of Virginia. Expenses were as follows:

Janitor	$1,044.00
Janitor Supplies	133.31
Utilities	400.03
Fuel Oil	370.91
Taxes	464.36
Total Cost	$2,412.67
Minus Income from 3 Offices	1,210.00
Total Cost to Medical Society of Va.	$1,202.61

Fortunately there were no expenses for Building Re-

pairs and the $500.00 budgeted for this item was not needed during the current year.

FLETCHER WRIGHT, M.D.
DON DANIEL, M.D.
HARRY J. WARTHEN, M.D., *Chairman*

State Board of Nurse Examiners

The Committee to Confer with the State Board of Nurse Examiners, appointed by Dr. James D. Hagood, President of The Medical Society of Virginia, 1956-1957, has, at the time of this writing, had no formal meetings and no requests, either from physicians or nurses, to consult.

JAMES M. HABEL, JR., M.D., *Chairman*
ANDREW D. HART, M.D.
JOHN R. MAPP, M.D.
FRANK S. JOHNS, M.D.
JOHN E. GARDNER, M.D.

Poliomyelitis

The development of an effective vaccine for the prevention of paralytic poliomyelitis during the past two years was greeted by the public with great interest and enthusiasm—an enthusiasm which the medical profession shared. The production of large amounts of vaccine by several manufacturers and the large scale inoculation programs all over the country offered at last a reasonable hope that paralytic poliomyelitis was under control. Everyone wished protection from this disease.

Last year the unfortunate experience of one large vaccine-producing firm on the West Coast was a sobering influence that slowed down the programs then developing. However, the Federal Government had by this time entered the picture with a large appropriation for vaccine and most of the states began extensive inoculation drives with the new vaccine. Virginia was one of the first states to start.

The Medical Society of Virginia was called on to assist the State Health Department in determining how the vaccine should be given. No state funds were available at the time from any source for the purchase of vaccine. We are informed by the State Health Officer that during the period in which the Poliomyelitis Vaccination Assistance Act of 1955 was in operation the State of Virginia requested all of the vaccine allotted to the State under the Act. During the operation of the Act up to December, 1956, 1,583,993 cc. of vaccine had been given. On January 16, 1957, only 6,120 cc. of allocated but unrequested vaccine remained in the state health agency.

In the initial stages of the Poliomyelitis Assistance Act the Special Committee of The Medical Society of Virginia advised the State Health Officer that the entire amount of vaccine should be distributed for the vaccination of the five to nine year old age group which were declared at that time, to be most in need of protection. The Committee also advised that no vaccine should be allocated for commercial distribution. Later, other age groups and pregnant women were added to the priority groups. All these groups were provided vaccine at mass clinics under the sponsorship and direction of the State and local health departments. Every county, city and town in Virginia save one small county participated in the program in various degrees. During the summer of 1956 the production of vaccine proceeded in good volume. In the early fall and winter of 1956, however, interest and enthusiasm in poliomyelitis protection rapidly subsided and considerable stocks of the vaccine began to accumulate in the health departments. At the end of 1956 production was then about equal to demand.

Because of the rapid loss of interest in the prevention of paralytic poliomyelitis after the summer season of 1956, the American Medical Association called a meeting of State Medical Society representatives in Chicago, January 26, 1957. The Chairman of the Virginia Poliomyelitis Committee attended. After receiving reports from Dr. Jonas Salk, the U. S. Public Health Service and many state and local medical societies, the conference recommended that all state and local medical societies should start at once to organize state wide immunization drives before the summer of 1957.

The Virginia Poliomyelitis Committee met soon thereafter and devised plans for a state-wide drive to start in April, 1957. At the same time the Virginia state office of the National Foundation for Infantile Paralysis, desiring to promote more widespread inoculations, advised local chapters that they could use a portion of their local funds for the purchase of vaccine. These local funds when deposited with official agencies could buy vaccine at a greatly reduced figure. This fiscal arrangement made it possible for a large number of persons to obtain protection at little or no cost.

Many local communities took advantage of this proposal and have carried on extensive programs in which large numbers of persons of all ages have been vaccinated. In this connection, the Norfolk and Roanoke County Medical Societies, the Richmond Academy of Medicine, physician groups in Middlesex County and in the Bowling Green area, conducted drives in cooperation with the local health departments and lay organizations. This large demand left little vaccine available for programs to be sponsored by the local medical societies. For this reason, many of the local programs were abandoned or postponed until supplies were adequate. Vaccine through commercial channels has only become available in good quantity in the past month.

Much remains to be done in a continuing drive to complete the program of inoculation that has been started and to encourage physicians to give Salk vaccine as a routine procedure to all children as well as young adults who are now most in need of protection.

Now that the vaccine is available in unlimited amounts it is hoped that local medical societies will reshape their plans for an inoculation drive during the coming year until all age groups throughout the State are protected.

J. D. BEALE, JR., M.D.
CHARLES B. BRAY, JR., M.D.
MCLEMORE BIRDSONG, M.D.
E. A. HARPER, M.D.
MASON ROMAINE, M.D.
LEE SUTTON, M.D.
R. C. HOOD, M.D., *Chairman*

Federal Medical Services

Your Committee on Federal Medical Services has, this year, devoted most of its time to a review of the Veterans Medical Care Program and its attending schedule of

fees. With few exceptions, the schedule has remained basically unchanged since its approval in 1947.

The Washington Office of the Veterans Administration has been most cooperative and, as a result, the Committee has negotiated what it believes to be a much more realistic schedule. This schedule went into effect on September 1 and, in all probability, each participating physician now has a copy. In this connection, members are urged to advise the Committee of any changes which they feel are in order. This information will prove most helpful during future negotiations.

The Committee continues to watch developments with reference to Medicare. A careful review of the program would seem to be in order before the Society undertakes to negotiate a new contract in 1958.

JOHN T. HAZEL, M.D., *Chairman*

Society Headquarters Building

The Society Headquarters Building Committee of The Medical Society of Virginia has met three times during the year and can report the successful completion of all ground work necessary before actual construction of the new building begins.

An attractive and spacious lot has been obtained in one of the prettiest sections of Richmond's West End and will serve as the perfect setting for a building which will offer a blend of beauty and dignity.

Your Committee has approved the architect's final plans for the building and construction bids will have been received by the time of the annual meeting. Costs, thus far, have remained well within the budget authorized by the House of Delegates and the Committee will continue to exercise the utmost care in this respect.

The plans have been drawn with service as the foremost consideration, and the headquarters will contain those features so necessary for dependable efficient operation. It will serve not only as the center of Society activities, but also as a workshop for Committees, specialty groups and individual members.

The ground level will contain offices, work and storage rooms, a vault for old and priceless records, visitors' waiting room and a conference room which will seat 55 comfortably.

Immediately over the conference room will be the offices of the Virginia Academy of General Practice and other allied groups. Thus, the new headquarters will, in fact, become the center of much of the medical organizational work in Virginia.

Spacious parking facilities will be available in the special off street parking area in front of the building—a feature sorely needed in these days of "modern living".

Your Committee sincerely believes that the new headquarters will be a building in which each member can take great pride.

JAMES P. KING, M.D., *Chairman*
W. LINWOOD BALL, M.D.
GUY W. HORSLEY, M.D.
FLETCHER J. WRIGHT, JR., M.D.
LOUIS P. BAILEY, M.D.

Insurance

The Insurance Committee had its final meeting on August 7, and received the annual report of the Saint Paul-Mercury Company on the professional liability program. The original agreement between the carrier and the Society called for a report at least once a year. A progress report on the sickness and accident program was also received from the Loyalty Group.

Mr. Andrew Sale, State Agent for Saint Paul, presented the liability insurance report. Since February of this year two hundred new subscribers have been enrolled, bringing the total members covered under the program to five hundred and thirty. If we deduct the doctors in the small towns and those working for the State who have never carried any form of liability coverage, this represents better than one-fifth, probably nearer one-fourth of the insurable membership. The premium volume for the first six months of 1957 was more than that of the entire year of 1956.

Although a number of claims were reported, the Committee was pleased to learn that the cost and the reserve involved was comparatively small, only one claim of any magnitude being reported. It was learned that this case had been reviewed by the local insurance committee, and that the physician concerned had agreed to abide by its recommendation. As a result, the case will be defended.

The thought was expressed in Committee that perhaps the opinion of local Committees could actually prove a disadvantage in court. The opinion of Mr. Duval was requested and he sees no reason why local committees should not continue to assist carriers to determine whether or not a claim should be settled or defended. Since this is a state program, the appointment of Committees would seem a proper action.

It was reported that the State Insurance Commissioner had raised certain objections to a letter which was sent out to the members over the Committee's signature. This letter informed the membership that the Society's plan had not raised its premium rates, although those companies belonging to the National Bureau of Casualty Underwriters had actually increased their surgical premiums by 17.2% (in Virginia). Another letter of clarification to the membership has been suggested by the Saint Paul Company and approved by the Insurance Committee. This letter is being processed for mailing.

Mr. George McDowell reported for the Loyalty Group, which now has 1,400 members covered for sickness and accident benefits. The carrier is satisfied with the experience of the plan. Mr. McDowell mentioned that within the past two years the plan has been improved, especially with reference to aviation provisions. Any members of the Society who have not been in practice more than five years, may avail themselves of this coverage without underwriting restrictions if they apply within forty days.

The question of paying insurance claims from the home office was brought up, and it was explained that this method has proven much more satisfactory, and avoids any possibility of delay. It was emphasized, however, that the Loyalty Group Plan was adopted by the Society with the understanding that administration and payment of claims would be at the local level.

Mr. Howard has had correspondence with several new members who had tried to get this insurance and were unable to obtain the coverage that they requested. This,

too, will be brought to the attention of the home office.

A number of insurance companies have presented proposals for other types of insurance such as (1) major hospital coverage, (2) business expense and (3) group life. However, it was the opinion of your Committee that until such time that a definite need is shown, it might be best for such programs to be by-passed—at least temporarily.

The Committee urges that an effort be made to follow through on the promotion of the sickness and accident and the professional liability programs at the local level.

FRANK A. FARMER, M.D., *Chairman*
W. D. LEWIS, M.D.
GUY W. HORSLEY, M.D.
JAMES L. CHITWOOD, M.D.
CHARLES V. AMOLE, M.D.
W. CALLIER SALLEY, M.D.
LOUIS P. BAILEY, M.D.

DELEGATES TO 1957 MEETING THE MEDICAL SOCIETY OF VIRGINIA

Where no name is listed it is indicative that no delegate or alternate was reported.

Delegates	*Alternates*
Accomack	
Dr. Donald F. Fletcher, Jr.	Dr. W. A. Eskridge
Albemarle	
Dr. C. G. Pearson	Dr. R. S. Blackman
Dr. M. D. Foster	Dr. H. L. Smith, Jr.
Dr. G. D. Spence	Dr. J. B. Twyman
Dr. T. S. Edwards	Dr. J. R. Morris, Jr.
Dr. Cary Moon, Jr.	Dr. James Andrews
Alexandria	
Dr. Ben C. Jones	Dr. John A. Sims
Dr. Richard E. Palmer	Dr. John C. Watson
Alleghany-Bath	
Amherst-Nelson	
Arlington	
	Dr. Edmund P. Naccash
Dr. Lloyd B. Burk, Jr.	Dr. Stephen J. Sheehy
Dr. William D. Dolan	Dr. Joseph Stein
Augusta	
Dr. Edward Watkins	Dr. G. C. Campbell
Dr. Thomas G. Bell	Dr. Treacy O'Hanlan
Dr. Charles L. Savage	Dr. Wm. G. Painter
Bedford	
Dr. W. V. Rucker	Dr. O. B. Darden
Botetourt	
Buchanan-Dickenson	
Dr. J. C. Moore	Dr. J. S. Richardson
Dr. T. C. Sutherland	Dr. J. P. Sutherland
Charlotte	
Culpeper	
Dr. C. G. Finney	Dr. J. Bernard Jones
Danville-Pittsylvania	
Dr. Snowden C. Hall, Jr.	Dr. F. M. McGovern
Dr. J. J. Neal	Dr. D. L. Arey
Fairfax	
Dr. Thomas E. Haggerty	Dr. John Prominski
Fauquier	
Dr. James L. Dellinger	Dr. Paul K. Candler
Dr. William R. Pretlow	Dr. Martin B. Hiden
Floyd	
Fourth District	
Dr. W. B. Bishop	Dr. E. M. Bane
Dr. K. S. Freeman	Dr. Dan Baugh
Dr. W. J. Ozlin	Dr. R. D. Keeling
Dr. Chas. W. Scott	Dr. Eppes Harris
Fredericksburg	
Halifax	
Dr. W. Lloyd Eastlack	Dr. W. D. R. Driscoll
James River	
Dr. J. H. Yeatman	Dr. A. C. Whitley
Dr. W. A. Pennington	Dr. Garland Dyches
Dr. Russell Snead	
Lee	
Dr. G. B. Setzler	Dr. T. S. Ely
Loudoun	
Louisa	
Lynchburg Academy	
Dr. R. F. Hawkins	Dr. Edward Calvert
Dr. John Morris, Jr.	Dr. Carol Rice
Dr. B. Kyle Mundy	Dr. Edwin Warren
Mid-Tidewater	
Dr. J. W. Chinn	
Dr. A. L. Van Name, Jr.	
Dr. Carl Broaddus	
Dr. Thomas Smith	
Dr. R. B. Bowles	
Dr. J. R. Parker	
Dr. A. W. Lewis, Sr.	
Dr. E. A. Lewis	

Delegates	*Alternates*
Norfolk	
Dr. William L. Taliaferro	Dr. Bernard L. Parrish
Dr. Harry Frieden	Dr. Marvin S. Herrington
Dr. Mallory S. Andrews	Dr. John Alexander Cocke
Dr. Karl K nneth Wallace	Dr. Lemuel E. Mayo
Dr. Samuel M. McDaniel	Dr. Cullen M. McCoy
Dr. Mason C. Andrews	Dr. H. C. Meredith, Jr.
Dr. W. Callier Salley	Dr. Donald T. Faulkner
Dr. Bernard Lidman	Dr. R. M. Reynolds
Northampton	
Dr. John R. Mapp	Dr. John R. Hamilton
Northern Neck	
Dr. Horace Kerr	
Dr. Melvin B. Lamberth	Dr. Norman R. Tingie
Dr. J. M. Booker	Dr. Martel J. Dailey
Dr. Paul C. Pearson	Dr. Harold E. Sisson
Dr. Charles Y. Griffith	Dr. C. Harper Ward
Northern Virginia	
Dr. James Holsinger	Dr. Fred Maphis, Jr
Dr. H. P. Maccubin	Dr. M. J. W. White
Dr. D nnis P. McCarty	Dr. E. B. Sherman
Dr. Harold D. Miller	Dr. George Murphy
Dr. John Snead	Dr. C. L. Riley
Dr. Frank Tappan	Dr. Carrol Iden
Orange	
Patrick-Henry	
Dr. W. N. Thompson	Dr. E. T. McNamee
Dr. H. C. Foster, Jr.	Dr. L. A. Faudree
	Dr. H. H. Price
Portsmouth Academy	
Dr. Russell M. Cox	Dr. M. H. Hood
Dr. Kalford W. Howard	Dr. George H. Carr
Princess Anne	
Dr. Ira Hancock	Dr. Robert Venner
Richmond Academy	
Dr. Elam C. Toone, Jr.	Dr. John W. Powell
Dr. William A. Young	Dr. Carl Meador
Dr. Daniel D. Talley, III	Dr. Willard Fitch
Dr. James B. Stone	Dr. F. P. Moore, II
Dr. Webster P. Barnes	Dr. J. Robert Massie, Jr
Dr. M. M. Pinckney	Dr. W. B. Blanton, Jr
Dr. W. Linwood Ball	Dr. Leslie Rose
Dr. Stuart Ragland, Jr.	Dr. William H. Higgins, Jr
Dr. Reuben Simms	Dr. William Hill
Dr. John P. Lynch	Dr. William H. Harris, Jr.
Dr. Rex Blankinship	Dr. Thomas F. Coates, Jr.
Dr. Wellford C. Reed	Dr. Robley D. Bates, Jr.
Dr. A. G. Brown, III	Dr. John D. Call
Dr. Charles M. Nelson	Dr. A. I. Dodson, Jr.
Roanoke Academy	
Dr. M. A. Johnson, III	Dr. David S. Garner
Dr. William H. Kaufman	Dr. K. D. Graves
Dr. Alexander McCausland	Dr. George Hurt
Dr. Charles H. Peterson	Dr. Charles Irvin
Dr. Harry B. Stone, Jr.	Dr. Daniel Leavitt
Dr. Philip C. Trout	Dr. E. B. Neal
Rockbridge	
Dr. Brooke B. Mallory	Dr. L. A. Micou
Rockingham	
Dr. N. M. Canter, Jr.	Dr. C. F. Armentrout
Dr. B. W. Nash	
Russell	
Scott	
Southwestern Virginia	
Dr. W. E. Malin	Dr. S. W. Huddle
Dr. George B. Kegley	Dr. Rufus Brittain
Dr. Moir G. Martin	Dr. J. G. Cox
Dr. W. Fred Delp	Dr. H. B. Brown, Jr.
Dr. J. Scott Shaffer	Dr. H. C. Spencer
Dr. Charles R. Duncan	Dr. Ray H. Grubbs
Dr. Joseph J. Eller	Dr. C. C. Hatfield
Dr. Seab A. Tuck	Dr. E. L. Bagby
Dr. Virgil O. Choate	Dr. J. B. Spinks
Tazewell	
Dr. Dorris A. Cunningham	Dr. Mary E. Johnston
Tri-County	
Dr. W. H. Chapman, Jr.	Dr. M. A. Michael
Dr. Henry Gardner	Dr. J. W. Lambdin
Dr. F. Ivan Steele	Dr. Hugh Warren
Dr. Lawrence J. Stetson	Dr. Philip Thomas
Warwick-Newport News	
Dr. R. V. Buxton	Dr. F. A. Carmines
Dr. J. W. Carney	Dr. F. N. Thompson
Dr. E. V. Siegel	Dr. J. W. Tankard
Williamsburg-James City	
Dr. Ben I. Painter	Dr. Herman Bailey
Wise	
Dr. Thomas J. Tudor	Dr. W. B. Barton

SCIENTIFIC EXHIBITS

Office Treatment of Common Foot Conditions—Forrest M. Swisher, M.D., and James M. Masterson, M.D., Arlington

Episioperineorrhaphy—Williams Bickers, M.D., Richmond

Carbon Dioxide for Retroperitoneal Pneumography—Robert McLelland, M.D., Ralph R. Landes, M.D., and Charles L. Ransom, M.D., Danville

Treatment of Viral Diseases with a Lipo-Protein-Nucleic Acid Complex (Reticulose)—Robert H. Anderson, M.D., William B. Wilkins, M.D., and Ralph M. Thompson, M.D., Alexandria.

Hip Disease in Children—Virgil R. May, Jr., M.D., and William Minor Deyerle, M.D., Richmond

Reconstructive Surgery of the Hand—C. C. Coleman, Jr., M.D., Richmond

The Hands in Arthritis—Joseph A. Kiesel, M.D., Washington, D. C.

Bladder Neck Obstruction in Infants—Joseph W. Hooper, Jr., M.D., and R. Bryant Hare, Jr., M.D., Wilmington, N. C.

New Concepts of Sex Differentiation—Guy Hollifield, M.D., K. R. Crispell, M.D., William Parson, M.D., W. N. Thornton, Jr., M.D., and G. A. Williams, M. D., Charlottesville

Joint and Bone Disease Due to Mycotic Infection—Elam C. Toone, Jr., M.D., and John J. Kelly, III, M.D., Richmond

Steroid Therapy of Rheumatic Fever—Carolyn Moore McCue, M.D., Richmond

Safety in Operations for Mitral Stenosis—William L. Jamison, M.D., Washington, D. C.

Operative Cholangiography—John D. Adams, M. D., George N. Chucker, M.D., and Thomas N. Warren, M.D., Clifton Forge

The Cardiac Silhouette in Newborn Infants—What Significance—George Cooper, Jr., M.D., and James Carter, M.D., Charlottesville

Otosclerosis—Diagnosis and Treatment—Cary N. Moon, Jr., and Fletcher D. Woodward, M.D., Charlottesville

The Intestinal Obstruction: Tape Recordings of Peristaltic Sounds and Other Advances in the Diagnosis and Treatment—John W. Devine, M.D., and John W. Devine, Jr., M.D., Lynchburg

Total Right Hepatic Lobectomy for Cancer (Motion Picture)—George T. Pack, M.D., and Richard Brasfield, M.D., New York, N. Y.

Tobacco and Health—Research Program of the Tobacco Industry Research Committee, New York, N. Y.

Time to Test—Virginia Tuberculosis Association, Richmond

Planned Parenthood Clinic Locations in Virginia—John M. Nokes, M.D., Charlottesville

A County Medical Society News Bulletin—Arlington County Medical Society in collaboration with the Alexandria Medical Society and the Fairfax County Medical Society

Blue Shield—Virginia Medical Service Association, Richmond

Presidents of The Medical Society of Virginia

President	Year of Meeting
*Dr. James McClurg, Richmond	1821
*Dr. William Foushee, Richmond	1822
*Dr. William Foushee, Richmond	1823
*Dr. James Henderson, Richmond	1824
Meetings Discontinued	
*Dr. Robert William Haxall, Richmond	1841
*Dr. Robert William Haxall, Richmond	1842
*Dr. Frederick Marx, Richmond	1843
*Dr. Thomas Nelson, Richmond	1844
*Dr. William A. Patteson, Richmond	1845
*Dr. William A. Patteson, Richmond	1846
*Dr. John A. Cunningham, Richmond	1847
*Dr. William A. Patteson, Richmond	1848
	1849
*Dr. Robert William Haxall, Richmond	1850
*Dr. Beverley R. Wellford, Fredericksburg	1851
*Dr. James Beale, Richmond	1852
*Dr. Thomas P. Atkinson, Danville	1853
*Dr. Carter P. Johnson, Richmond	1854
*Dr. H. C. Worsham, Dinwiddie	1855
*Dr. H. C. Worsham, Dinwiddie	1856
*Dr. James Bolton, Richmond	1857
*Dr. Levin S. Joynes, Richmond	1858
Meetings Discontinued	
*Dr. R. S. Payne, Lynchburg	1870
*Dr. R. S. Payne, Lynchburg	1871
*Dr. A. M. Fauntleroy, Staunton	1872
*Dr. Harvey Black, Blacksburg	1873
*Dr. A. G. Tebault, London Bridge	1874
*Dr. S. C. Gleaves, Wytheville	1875
*Dr. F. D. Cunningham, Richmond	1876
*Dr. J. L. Cabell, University	1877
*Dr. J. H. Claiborne, Petersburg	1878
*Dr. L. S. Joynes, Richmond	1879
*Dr. Henry Latham, Lynchburg	1880
*Dr. Hunter McGuire, Richmond	1881
*Dr. G. W. Semple, Hampton	1882
*Dr. W. D. Cooper, Morrisville	1883
*Dr. J. E. Chancellor, Charlottesville	1884
*Dr. S. K. Jackson, Norfolk	1885
*Dr. Rawley W. Martin, Chatham	1886
*Dr. Bedford Brown, Alexandria	1887
*Dr. Benjamin Blackford, Lynchburg	1888
*Dr. E. W. Row, Orange C. H.	1889
*Dr. Oscar Wiley, Salem	1890
*Dr. W. W. Parker, Richmond	1891
*Dr. H. Grey Latham, Lynchburg	1892
*Dr. Herbert M. Nash, Norfolk	1893
*Dr. Wm. P. McGuire, Winchester	1894
*Dr. Robt. J. Preston, Abingdon	1895
*Dr. Wm. L. Robinson, Danville	1896
*Dr. Geo. Ben Johnston, Richmond	1897
*Dr. Lewis E. Harvie, Danville	1898
*Dr. Jacob Michaux, Richmond	1899
*Dr. Hugh T. Nelson, Charlottesville	1900
*Dr. J. R. Gildersleeve, Tazewell	1901
*Dr. R. S. Martin, Stuart	1902
*Dr. J. N. Upshur, Richmond	1903
*Dr. Joseph A. Gale, Roanoke	1904
*Dr. Wm. S. Christian, Urbanna	1905
*Dr. Lomax Gwathmey, Norfolk	1906
*Dr. Paul B. Barringer, Charlottesville	1907
*Dr. Wm. F. Drewry, Petersburg	1908
*Dr. Stuart McGuire, Richmond	1909
*Dr. E. T. Brady, Abingdon	1910
*Dr. O. C. Wright, Jarratt	1911
*Dr. Hugh M. Taylor, Richmond	1912
*Dr. Southgate Leigh, Norfolk	1913
*Dr. Stephen Harnsberger, Catlett	1914
*Dr. Samuel Lile, Lynchburg	1915
*Dr. Joseph A. White, Richmond	1916
*Dr. Geo. A. Stover, South Boston	1917
*Dr. Ennion G. Williams, Richmond	1918†
*Dr. Ennion G. Williams, Richmond	1919
*Dr. Paulus A. Irving, Farmville	1920
*Dr. Alfred L. Gray, Richmond	1921
*Dr. E. C. S. Taliaferro, Norfolk	1922
*Dr. John Staige Davis, University	1923
*Dr. W. W. Chaffin, Pulaski	1924
*Dr. Hunter H. McGuire, Winchester	1925
Dr. W. L. Harris, Norfolk	1926
*Dr. J. Shelton Horsley, Richmond	1927
*Dr. J. W. Preston, Roanoke	1928
*Dr. J. Bolling Jones, Petersburg	1929
*Dr. Charles R. Grandy, Norfolk	1930
*Dr. J. Allison Hodges, Richmond	1931
*Dr. I. C. Harrison, Danville	1932
*Dr. J. C. Flippin, University	1933
*Dr. R. D. Bates, Newtown	1934
*Dr. F. H. Smith, Abingdon	1935
*Dr. P. St. L. Moncure, Norfolk	1936
Dr. J. M. Hutcheson, Richmond	1937
*Dr. G. F. Simpson, Purcellville	1938
Dr. A. F. Robertson, Jr., Staunton	1939
*Dr. H. H. Trout, Roanoke	1940
Dr. W. B. Martin, Norfolk	1941
*Dr. Roshier W. Miller, Richmond	1942
Dr. J. M. Emmett, Clifton Forge	1943
*Dr. C. B. Bowyer, Stonega	1944
Dr. H. B. Mulholland, Charlottesville	1945
*Dr. Julian L. Rawls, Norfolk	1946
*Dr. W. L. Powell, Roanoke	1947
*Dr. Guy R. Fisher, Staunton	1948
*Dr. M. Pierce Rucker, Richmond	1949
Dr. W. C. Caudill, Pearisburg	1950
Dr. C. Lydon Harrell, Norfolk	1951
Dr. John T. T. Hundley, Lynchburg	1952
Dr. James L. Hamner, Mannboro	1953
Dr. V. W. Archer, Charlottesville	1954
Dr. Carrington Williams, Richmond	1955
Dr. James P. King, Radford	1956
Dr. James D. Hagood, Clover	1957

*Deceased.

†Owing to influenza epidemic during World War I. the council met in 1918, and Dr. Williams was continued as President.

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgment of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Goepp's Medical Medical State Board Questions and Answers. By HARRISON F. FLIPPIN, M.D., Professor of Clinical Microbiology, The Graduate School of Medicine, The University of Pennsylvania. Ninth Edition. W. B. Saunders Company, Philadelphia. 1957. 569 pages. Cloth. Price $8.00.

Ciba Foundation Colloquia on Endocrinology. Volume 10. Regulation and Mode of Action of Thyroid Hormones. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B. Ch., and Elaine C. P. Millar, A.H.-W.C., A.R.I.C. Little, Brown and Company, Boston. 1957. xii-311 pages. With 114 Illustrations. Cloth. Price $8.50.

Ciba Foundation Symposium on the Chemistry and Biology of Purines. Editors for the Ciba Foundation, G. E. W. Wolstenholme, O.B.E., M.A., M.B., B.Ch., and Cecilia M. O'Connor, B.Sc. Little, Brown and Company, Boston. 1957. xii-327 pages. With 124 Illustrations and structural formulae. Cloth. Price $9.00.

William Harvey. His Life and Times: His Discoveries: His Methods. By LOUIS CHAUVOIS. Foreword by Sir Zachary Cope. Philosophical Library, New York. 1957. 271 pages. Illustrated. Cloth. Price $7.50.

Vegetable Oils in Nutrition. With special reference to unsaturated fatty acids. By DOROTHY M. RATHMANN, Ph.D., Multiple Fellowship of Corn Products Refining Company, Mellon Institute, Pittsburgh. Published by the Corn Products Refining Company, New York. 1957. 70 pages.

The Chancing Patient-Doctor Relationship. By MARTIN G. VORHAUS, M.D., F.A.C.P. Drawings by A. Birnhaum. Horizon Press, New York. 1957. 310 pages. Price $3.95.

A Woman Doctor Looks At Love and Life. By DR. MARION HILLIARD, Chief of Obstetrics and Gynecology, Women's College Hospital, Toronto. Doubleday & Company, Inc., Garden City, New York. 1957. 190 pages. Price $2.95.

Foot Troubles. By T. T. STAMM, F.R.C.S. Philosophical Library, Inc., New York. 1957. viii-122 pages. Illustrated. Cloth. Price $4.76.

Surgeons All. By HARVEY GRAHAM, M. D. Foreword by Oliver St. John Gogarty. Philosophical Library, New York. 1957. 459 pages. With 29 Illustrations. Cloth. Price $10.00.

Science Looks At Smoking. A New Inquiry into the Effects of Smoking on your Health. By ERIC NORTHRUP. Introduction by Dr. Harry S. N. Greene, Chairman, Department of Pathology, Yale University. Coward-McCann, Inc., New York. 1957. 190 pages. Cloth. Price $3.00.

General Surgery. Volume II. Surgery in World War II, Medical Department, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., M. D.; Editor for General Surgery, Michael E. DeBakey, M. D.; Associate Editors, W. Philip Giddings, M. D., and Elizabeth M. McFetridge, M. D. Office of the Surgeon General, Department of the Army, Washington, D. C., 1955. xxiv-417 pages. Illustrated. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., Price $4.25.

Orthopedic Surgery In The European Theater of Operations. Surgery in World War II, Medical Department, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., M. C.; Editor of Orthopedic Surgery, Mather Cleveland, M. D.; Associate Editor, Elizabeth M. McFetridge, M. A. Office of the Surgeon General, Department of the Army, Washington, D. C., 1956. xv-397 pages. Illustrated. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., Price $4.00.

The Riddle of Stuttering. By C. S. BLUEMEL, M.D., The Interstate Publishing Company, Danville, Illinois. 1957. 142 pages. Hard bound $3.50 and paper bound $1.50.

The author, a Colorado physician and a Fellow of the American Speech and Hearing Association, published his first work on this subject 44 years ago. His long experience, his historical sense and his willingness to consider the various etiologies and therapies involved in this "riddle"—all of these qualify Dr. Bluemel eminently to write on stuttering.

His approach is that of a psychiatrist, yet he recognizes that stuttering begins in childhood as non-fluency and that much of the neurotic riddle appears in later years—quite possibly and largely as a result of unhappy speech experiences between the ages of 3 and 7. He feels, with Wendell Johnson, another national authority, that much stammering could be prevented by proper handling of normal non-fluency in childhood. For the adult stammerer he advocates a method he labels "verbal thinking".

Magnanimously, Dr. Bluemel is donating proceeds from this book to the American Speech and Hearing Foundation.

JOHN COLLISON

Gynecologic Therapy. By WILLIAM BICKERS, M.D., Attending Gynecologist to Richmond Memorial, Retreat for the Sick, Sheltering Arms, Richmond Community and Evangeline Booth Hospitals, Richmond, Virginia. Charles C. Thomas, Springfield, Illinois. 1957. xiii-158 pages. Cloth. Price $4.25.

On the jacket we read, "Gynecologic therapy is born out of the apparent need of interns and residents who are confronted for the first time with the responsibility for clinical diagnosis and treatment of gynecologic patients." In this respect, Bickers' monograph admirably fills the need. Because of the decline in the number of clinic patients available, the young men are not becoming familiar with the

day to day problems that confront the gynecologist and the general practitioner. This book, in a logical sequence, takes up these problems; discusses the etiology and, where necessary, the pathology; and the treatment of the various gynecological disorders.

There is no attempt, and rightly so, to discuss each entity comprehensively. Because of this, most of the book is rather dogmatic. However, therapy advised seems to be that recognized by the leaders in the field. The chapter on leukorrhea, in a later edition, will most certainly be revised to take into consideration the newer techniques of treatment, particularly the oral treatment of trichomoniasis.

The book is not illustrated. A few line drawings might have helped to a clearer understanding of anatomical and mechanical principles. Also, not every fledgling physician is familiar with office gynecic apparatus; no doubt the instrument salesman will soon add to his knowledge.

Gynecologic Therapy is a worthwhile book and should prove useful, not only to the resident and intern, but also to the practicing physician.

—W.McM.

Rypin's Medical Licensure Examinations. By WALTER L. BIERRING, M.D. Eighth Edition. J. B. Lippincott Company, Philadelphia. 1957. 964 pages.

Epilepsy. Grand Mal, Petit Mal, Convulsions. By LETITIA FAIRFIELD, C.B.E., M.D., D.P.H. Philosophical Library, Inc., New York. 1957. 159 pages. Price $4.75.

Orthopedic Surgery in the Mediterranean Theater of Operations. Surgery in World War II. Medical Department, United States Army. Editor in Chief, Colonel John Boyd Coates, Jr., M. D.; Editor for Orthopedic Surgery, Mather Cleveland, M. D.; Associate Editor, Elizabeth M. McFetridge, M. A. Office of the Surgeon General, Department of the Army, Washington, D. C., 1957. xx-368 pages. Illustrated. For sale by the Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C., Price $4.00.

Liver, Biliary Tract and Pancreas. By FRANK H. NETTER, M.D. Edited by Ernst Oppenheimer, M.D. The Ciba Collection of Medical Illustrations. Volume 3. A Compilation of Paintings on the Normal and Pathologic Anatomy of the Digestive System. Commissioned and published by Ciba. 1957. ix-165 pages. 133 Full-Color Plates. Price $10.50.

Ciba Pharmaceutical Company began sending out full color illustrations of normal and pathologic anatomy, painted by Dr. Frank H. Netter, more than ten years ago, and these were well received. This volume is an outgrowth of these earlier drawings and comprises a nice collection of colored drawings illustrating the development of the liver and its circulation through normal and pathophysiological states as well as that of the gall bladder, bile ducts and pancreas.

There is a tendency toward oversimplification in the drawings and accompanying text, but this is not a severe criticism as a book of this type perhaps would find difficulty expressing differing concepts.

The contributions and consultants to this volume, Drs. Bodansky, Cliffton, Kozoll, Popper, and Sboror are all well known in their respective fields and have collaborated nicely on this volume, which is, in actuality, a color atlas of gastro-enterology.

ROBERT EDGAR MITCHELL, JR., M.D.

William Harvey. His Life and Times: His Discoveries: His Methods. By LOUIS CHAUVOIS. Foreword by Sir Zachary Cope. Philosophical Library, New York. 1957. 271 pages. Illustrated. Cloth. Price $7.50.

In his preface, M. Chavois states that in the examination of the life and work of William Harvey, who "appears before us intensely human, a man serene in his science, so honest and upright, so enthusiastic for truth, so incomparably sure in judgment and in scientific method, no finer model can be offered to those who would go forward with unfaltering steps in the pursuit of scientific knowledge or in the achievement of discovery. Such a story as is told in this book must also inspire, guide and sustain those who would taste the intense satisfaction of a life inspired by a dream and informed with great accomplishment."

After reading these eloquent remarks, I eagerly looked forward to what I thought would be an inspiring and informative biography of the discoverer of the circulation. I couldn't have been more disappointed. Harvey is certainly not made "intensely human"; in fact, he doesn't come to life at all. If he is "a man serene in his science, so honest and—etc.," the reader must take the author's word for it. Certainly no evidence is presented to prove him right. M. Chavois purports to describe the life, times, discoveries, and methods of Harvey and to convey inspiration to the reader by so doing. Unfortunately, the work is sadly deficient in describing these topics and in inciting inspiration.

This really is a curious work, and one wonders just what the author's purpose was in writing it. It is difficult to believe that he intended this work to be read by the general public, for he seems to take for granted that the reader is already familiar with the life, times, discoveries, and methods of Harvey, and that they need be only briefly mentioned (if mentioned at all). M. Chavois concerns himself mainly with points that could only be academic interest: discussion of disputed historical facts and interpretations and the introduction of new data which all but the historian would consider insig-

nificant. I have no objection to this as such, but, in confining himself solely to this material, I feel that M. Chavois, has, in reality, written a long essay and not the all embracing biography the title would lead us to believe. I doubt, however, if many scholars will be satisfied with this work, for there are very few footnotes to indicate the reference sources.

A few examples will suffice to indicate my objections. Two sentences are all that is devoted to Harvey's married life. The first states to whom he was married and when and where. The next gives the date it ended (but not how). Harvey was married forty-one years, years during which all his great work was done. Certainly ignoring this phase of Harvey's life does in no way aid the reader in obtaining a picture of the whole man. In contrast, almost three pages are devoted to a discussion of the probable origin of Harvey's coat of arms. There is little said of Harvey's friends and teachers, but two pages are devoted to the possibility of Harvey's ever meeting William Shakespeare. Of Harvey's intellectual development and religious views, nothing is said. We are told of Harvey's incomparable scientific method in the preface, yet there is no mention of it in the text. What was medicine like in the "times" of Harvey? Did the way Harvey practice medicine differ in any way from the established practices of the day? If so, did his knowledge of the circulation of the blood influence these differences? And so it goes throughout the text.

In the chapter, "Harvey's Work and the Texts", M. Chavois shows that those who have interpreted Harvey as saying that the heart is the starting point of the circulation are in error. Harvey "placed the 'fermentative' and regenerating process of the blood in the vena cava, and he considered, therefore, that the vena cava was the starting-point of his circulation of the blood. I think I am right in stating that no one, up to now, has pointed out or noted this final expression of Harvey's views."

As it happens, M. Chavois has a theory about the circulation of the blood, himself, and he uses this particular point as a springboard for presenting his own views. "The system of the circulation as universally taught today locates the starting-point of the blood-stream in the 'motor' of the right auricle," writes Chavois. "This system is honestly but erroneously attributed to Harvey." He (Chavois) believes that the origin is "in the venous exits of all the organs—that is to say, in the thousand little rivulets that carry away the matter produced by the process of digestion or convey venous blood out of the organs themselves. . . . We need not spend much time in examining the first contention, that of the closed (!) blood circuit, without any starting-point. Obviously the blood which continually exhausts itself by nourishing the organs must—if it is not to dry up—receive constant supplies from without in order to make up for what it loses in the tissues." The heart, M. Chavois, explains, is simply a pump in midstream into which flows blood from the veins of all the active organs, "blood that has been utilized and much that is not and is therefore 'recuperable.'" This blood and the "new blood entering from the intestines—commingle at the cavo-hepatic confluence. . . . This is no mere logical quibble, nor a dispute about terms, but a reorientation of our view of the circulation which is of vital importance in its therapeutic implications." For example, "consider what is called a cardio-pulmonary oedema crisis, that dreadful and sudden suffocation caused by an oedematous condition of the lungs." This, he states, is caused by a sudden constriction of "peripheric venous circulation. . . . This contraction (which might be compared with the wringing out of a sponge) forces a stream of blood towards the heart and lungs with great violence." Treatment of this condition, therefore, should not be directed toward the heart, but to "the peripheric field which should be dilated and decongested (by morphine, for instance.)" Possibly this last quotation will in part explain the author's purpose in writing this biography. "The conception of the blood-stream *as* a stream, with a recognizable source, is the relevant and important point of it in this present work."

I will not deny that the above may be the relevant point in the text, but I question whether it is relevant in appearing in a biography of William Harvey. It is not a theory which is in anyway directly connected with Harvey's work, and it is stretching the imagination even to relate them indirectly. They have in common that both theories concern the blood, and that both met with opposition when first presented.

Michael K. Rees.

Woman's Auxiliary . . .

President ..... Mrs. Lee S. Liggan, Irvington
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TENTATIVE PROGRAM
of the
Thirty-fifth Annual Convention
Washington, D. C. October 27-30, 1957
Headquarters — Shoreham Hotel

A most cordial invitation is extended to all members of the Woman's Auxiliary to The Medical Society of Virginia, their guests and the guests of physicians attending the Convention, to participate in all social functions and attend the general meetings of the Auxiliary.

Luncheon tickets will be available at the registration desk in the main lobby of the hotel. Luncheon reservations will close at 10:00 A. M., Tuesday, October 29. Please register early and obtain your tickets, program and badge.

Those who wish to take the Tour of the City of Washington will register at the registration desk. A Hospitality Room will be provided for the members and guests.

Registration Hours

Sunday October 27 4:00 P. M. to 8:00 P.M.
Main Lobby
Monday October 28 10:00 A. M. to 4:00 P. M.
Lower Main Lobby
Tuesday October 29 9:00 A.M. to 10:00 A. M.
Lower Main Lobby

Monday, October 28

10:00 to 11:00 A. M. Coffee Hour—Bird Cage Walk, Shoreham Hotel, for all members and guests

Transportation will be furnished to Alexandria for those who wish to play golf.

2:30 P. M. Pre-Convention Board Meeting — North Room, Shoreham Hotel

Mrs. Lee S. Liggan, President, presiding

All State officers, chairmen, County Auxiliary presidents and presidents-elect are expected to attend. All Members-at-Large are invited to attend.

Tuesday, October 29

9:15 A. M. Formal Opening of the Thirty-fifth Annual Convention of the Woman's Auxiliary to The Medical Society of Virginia—Palladian Room, Shoreham Hotel

Mrs. Lee S. Liggan, President, presiding

Invocation—Mrs. Hawes Campbell

Pledge of Allegiance to our National Flag

Pledge of Loyalty—"I pledge my loyalty and devotion to the Woman's Auxiliary to the American Medical Association. I will support its activities, protect its reputation, and ever sustain its high ideals."

Address of Welcome—Mrs. James M. Moss, Alexandria Auxiliary

Response—Mrs. Henry R. Bourne, President, Danville-Pittsylvania Auxiliary

Convention Announcements—Mrs. James B. Gilbert, Alexandria Auxiliary

Resolutions for Mrs. Fletcher J. Wright, Sr.—Mrs. J. E. Hamner, Petersburg Auxiliary

In Memoriam—Mrs. Maynard R. Emlaw

Roll Call—Mrs. James R. Grinels, Recording Secretary

Minutes of Thirty-fourth Annual Convention—Mrs. James R. Grinels

Presentation of Honored Guests—Mrs. Paul C. Craig, President of the Woman's Auxiliary to the American Medical Association and Mrs. Oscar W. Robinson, President of the Woman's Auxiliary to the Southern Medical Association.

President's Report—Mrs. Lee S. Liggan

Reports of Officers

Reports of Chairmen of Standing Committees

Reports of Chairmen of Special Committees

Reports of County Auxiliary Presidents
(Please limit above reports to two minutes)

Report of Annual Convention of the Woman's Auxiliary to A. M. A. held in New York, N. Y., June 3-7, 1957 —Mrs. W. F. Schmidt, Wise County Auxiliary

Report of Registration—Mrs. Emanuel Newman, Fairfax Auxiliary

Unfinished Business

New Business

Recommendations from the Board

Report of Revisions Committee—Mrs. Richard Reynolds, Chairman

Courtesy Resolutions—Mrs. Rufus Brittain

Report of Nomination Committee—Mrs. Malcolm H. Harris

Election of Officers

Adjournment

Luncheon

1:00 P. M. Blue Room, Shoreham Hotel

Mrs. Lee S. Liggan, President, presiding

Invocation—Mrs. Hawes Campbell

Luncheon

Guest Speakers

Mrs. Paul C. Craig, President, Woman's Auxiliary to the A. M. A.

Mrs. Oscar W. Robinson, President, Woman's Auxiliary to the Southern Medical Association

Installation of Officers—Mrs. Paul C. Craig

Presentation of President's pin and gavel—Mrs. Lee S. Liggan

Inaugural Remarks—Mrs. John R. St. George

Presentation of Past President's pin—Mrs. Mervin W. Glover

Fashion Show

Adjournment

3:30 P. M. Post-Convention Board Meeting, Palladian Room, Shoreham Hotel

Mrs. John R. St. George, President, presiding

All State officers and chairmen, County Auxiliary Presidents and Presidents-elect are expected to attend. All Members-at-Large are invited to attend.

Wednesday, October 30

8:30 A. M. Past Presidents' Breakfast—Mrs. Mervin W. Glover, Chairman

Committee on Local Arrangements

General Chairmen	Mrs. James B. Gilbert
	Mrs. Thomas A. McGavin
Registration	Mrs. Emanuel Newman
	Mrs. Thomas Haggerty
Credentials	Mrs. H. T. Kulesher
	Mrs. G. A. Zimmerman
Secretary-Treasurer	Mrs. J. R. McGriff
Hospitality	Mrs. Lee Martin
Printing	Mrs. D. C. McCollum
Transportation for golf	Mrs. Thomas A. McGavin
Press and Publicity	Mrs. Robert Mitchell
Flowers and Decorations	Mrs. C. J. Murphy, Jr.
Sight-Seeing Tour	Mrs. Milton B. Stein
	Mrs. F. Preston Titus
Luncheon	Mrs. James B. Gilbert
	Mrs. H. G. Thompson
Fashion Show	Mrs. A. J. Orlosky
	Mrs. Henry Bastien
Timekeeper	Mrs. Sigmund Newman

Asian Flu Preparedness

For the first time in history, the medical profession is "ahead of an impending epidemic of influenza," according to Dr. Leroy E. Burney, surgeon general of the U.S. Public Health Service.

In fact, even before the first cases of Asian flu were reported, the profession was expecting a new strain of flu virus to appear, according to Keith E. Jensen, Ph.D., chief of the respiratory disease unit in the USPHS virus and rickettsia section at Montgomery, Ala. Their statements appeared in the August 31st Journal of the American Medical Association.

Dr. Jensen said, however, that while scientists were expecting a new type of flu virus, they could not develop a vaccine against it until it actually emerged and had been analyzed. Careful study of past epidemics, which had made it possible to predict appearance of a new strain, also made it possible to develop vaccine quickly.

Dr. Jensen explained that four major types of virus (A,B,C, and D) are known to cause influenza. Each type is divided into several sets or families of strains. Type A—the one involved in the current epidemic—had produced three strains before 1957, including the one which apparently caused the 1918 pandemic (a world-wide epidemic).

Each strain had appeared and vanished, and this pattern had occurred often enough for investigators to expect it again. It appeared in May of 1957 when samples of what is now called Far East virus A were brought here from flu victims in Singapore.

The Far East virus is similar to the older strains but differs enough from all other types to require an entirely new vaccine. This has been made from viruses collected in early outbreaks of Asian flu.

Three different production methods have been worked out, and Army tests have shown the vaccine to be about 70 per cent effective, Dr. Burney noted.

He credited much of the profession's preparedness to the alertness of laboratory workers in the Far East who isolated the new virus, and to the world-wide influenza study program of the World Health Organization.

Dr. Burney said there is no doubt of the likelihood of an epidemic this winter, but at the moment there is no reason to expect it to be severe. The major danger is that—as probably happened in 1918—the virus may mutate, producing new strains different from the "parent" virus.

For this reason, even though the epidemic thus far has been "mild in terms of fatality," it cannot be taken lightly.

"Illness usually are prostrating for two or more days and are often followed by a period of lassitude and weakness. In an epidemic, medical care facilities may be temporarily overtaxed, attendance in school interrupted, and the entire economy disrupted by absenteeism in all types of industries, some of which are in critical areas."

The vaccine is "the only preventive tool at our command." Therefore, the USPHS, the A.M.A. and the Association of State and Territorial Health Officers are developing a plan for voluntary vaccination of as many persons as possible. The A.M.A. has asked its state and county societies to organize local programs to meet any possible outbreak. The A.M.A. program also is designed to relieve the strain on medical personnel which occurs "when so many people suddenly become ill."

"Any such campaign must be conducted in an orderly fashion to avoid confusion and hysteria in the public and will call for the combined efforts of all of us."

Editorial . . . .

Forms . . . Forms . . . Forms

UNTIL RECENT YEARS a physician or surgeon who was inclined to confine his work to the practice of medicine was able to do so with a minimum of outside interference. That happy state no longer holds. He now finds himself playing the role of a captive and unpaid employee of countless insurance companies.

Today each mail and a goodly number of the patients who come to the office bring forms of every conceivable size, shape and color, each of which must be filled out carefully from top to bottom else the patient will not be reimbursed for his hospital or medical expenses, or the time lost during his illness, or he may be in danger of not having an insurance policy renewed, or a new policy issued, as the case may be. All of this means the physician finds his desk littered with insurance blanks every time he returns to his office and a considerable amount of time and attention is diverted from the patient and directed to filling out these interminable forms.

It is true that for many patients a health and accident policy of some type is the only form of medical security available. The fault lies not in the policy but in the antiquated, wordy, unnecessarily long and repetitious forms the physician or surgeon is called upon to complete. Some of the insurance blanks obviously were prepared before hospitals had come into general use, for there is no provision for indicating that the patient is or has been hospitalized. Other forms make no reference to possible surgery. These shortcomings are not so surprising when encountered in a weekly pay policy but it is discouraging to find the same type of forms adopted by some of the established insurance companies which have branched out recently into this type of medical coverage.

The most irksome policies require a weekly recapitulation of the entire dreary set of questions, many of which overshoot or fall short of the mark which they obviously were designed to attain. The fact that a patient patently is going to be incapacitated for a period of weeks or months does not permit the by-passing of a single answer for a single week lest the patient lose the benefit of the policy.

The blandness with which the insurance company assumes that the most overworked physician will answer in detail each question, regardless as to how irrevelant it may be from the standpoint of the patient's physical status, is epitomized by the query as to whether this is the only insurance company from which the patient is receiving payments and if not, to enumerate the other companies. For unmitigated nerve this is one for the record. Does anyone ever answer that question?

The difficulties encountered by the physician frequently are compounded by an inability or disinclination on the part of the patient to fill out his part of the form. This means that just as the physician completes his part and as he turns to resume the work for which he spent many years preparing himself, the patient will say "Doc, I don't understand these things. Won't you fill out my part too?"

There are some outstanding and refreshing exceptions to the rule that a prepaid medical policy must be stupidly worded. The pink sheet of the Blue Shield Plan is a pleasure to behold. Even the Medicare blank, which of necessity must be detailed, is simple compared to most of the insurance forms. These, however, are exceptional.

Medicine is extending its boundaries in all directions and has made more progress in the past half century than in all of preceding recorded history but each day physicians waste valuable time filling out health and accident forms, which were outmoded before they were adopted fifty years ago. A reform in this matter is long overdue but unless the physicians demand it we will continue to be imposed upon just as we have been in the past.

H.J.W.

News Notes . . . .

New Members.

Since the list published in the September issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

William W. S. Butler, III, M.D., Roanoke
Leonard Leslie Davis, Jr., M.D., Buena Vista
Patrick C. Devine, M.D., Norfolk
James Barrett Jones, M.D., Lynchburg
Thomas Edward O'Brien, M.D., Falls Church
Glenn Brady Updike, Jr., M.D., Charlottesville

Neuropsychiatric Society of Virginia.

This Society, a district branch of the American Psychiatric Association, will hold its meeting at the Shoreham Hotel, Washington, D. C., on Sunday, October 27th. Cocktails will be at 5:30, followed by dinner.

The guest speaker will be Dr. Ian Stevenson, Professor and Head of the Department of Neurology and Psychiatry of the University of Virginia, School of Medicine. His subject will be "The Experimental Psychoses".

Members and guests of The Medical Society of Virginia are invited to hear the paper by Dr. Stevenson.

Headquarters Building.

Final plans for the new headquarters building of The Medical Society of Virginia have been approved. Bid are now being made for the construction and it is our hope that by the next issue of the Monthly, we will be able to report that the "digging has begun".

Diagnosis of Poisonings.

Beginning with this issue, the Monthly will run a series of "Chemical Tests Useful in the Diagnosis of Poisonings". This information is being furnished by the Richmond Poison Information Center and we hope will be very useful to our readers. The first one is found on page 504.

Dr. Drewery H. Mason,

Ridgeway, was honored with a party on August 31st commemorating his 50th year of service to Henry County. Dr. T. H. Dickerson, president of the Patrick-Henry Medical Society presented him with a plaque in behalf of the Ridgeway citizens.

Dr. Fred Maphis,

Strasburg, has been named vice-president of the Shenandoah County Tuberculosis Association.

Williamsburg-James City Medical Society.

This Society met at the home of Dr. Turnage in Yorktown on September 11th for refreshments. Dinner was served at the Ranch House. Dr. W. T. Thompson, Jr., Chief of Medical Service, McGuire VA Hospital, Richmond, spoke on Problems of Functional and/or Organic Disease.

Dr. Joseph T. Byrne,

A Richmond general practitioner, has been appointed medical director of the city service clinic at the Medical College of Virginia.

Virginias Seniors.

Dr. Allen T. Hawthorne, Winchester, was recently elected president of this organization which is composed of golfers from Virginia and West Virginia. The annual golf tournament was held at the Greenbrier, White Sulphur Springs.

Dr. E. G. Gill, Roanoke, was named a member of the Board of Governors from Virginia.

Statue of Poe Presented.

Dr. George Barksdale, Richmond, has presented to the State of Virginia a life-size bronze statue of Edgar Allen Poe. The statue is of Poe seated in a chair with a pen and paper in his hands and it weighs 810 pounds.

Virginia State Board of Medical Examiners.

At the meeting of the Board, June 13-15, the following physicians were licensed by examination:

Salvador Alatorre-Mercado, Hamilton, Ohio
Jack Preston Andrews, Richmond
Burness Ferdinand Ansell, Jr., Richmond
Edward Joseph Armbruster, Jr., Speedway, Ind.
Nushet Osman Atuk, Charlottesville
Loretto M. R. Auvil, Beaverdam
Bruce A. Baber, Roanoke
John Thomas Baggerly, Richmond
S. Joseph Bailey, Jacksonville, Fla.
Charles Lewis Baird, Jr., Hampden-Sydney
Robert Edward Barrett, Williamsburg
George W. Basany, West Trenton, N. J.
Hampton Robert Bates, Jr., Roanoke
Robert Francis Baxter, Charlottesville
Hans Ekkehard Berger, New York, N. Y.
John Mason Bishop, Jr., Richmond
Wilbur Jordan Blechman, Arlington
John Iverson Boswell, Jr., Charlottesville
Douglas Estes Bragdon, Baltimore, Md.
Lloyd Clarence Brannon, Charlottesville
Joachim Hermann Buchholz, Washington, D. C.
Teddy Fuqua Burton, Vinton

Charles Jackson Buswell, Warwick
Ronald H. G. Butcher, Colony
Donald Raymond Cagle, Charlottesville
Antonio Lucio Canadas, Arlington
Francis John Carbonara, Hampton
Joseph Hess Caricofe, Lancaster, Pa.
Elizabeth Randolph Carmichael, Fredericksburg
Gaspar Carrasquer, Louisville, Ky.
William Thomas Carter, Charlottesville
John Roger Casey, Boyce
Rodolfo Cejas-Rosas, New York, N. Y.
Charles Richard Chamberlain, Jr., Covington
John Loomis Chamberlain, III, Washington, D. C.
Hugh Guasco Chavez, Mt. Vernon, N. Y.
Bao-jen Chern, Brooklyn, N. Y.
Roman Czerny Cherny, Ft. Eustis
Joseph Chomicki, Beckley, W. Va.
Laurence Glenn Christie, Jr., Richmond
William Turkington Clarke, Richmond
Joseph Emory Coleman, Boston, Mass.
Luke Combs, Springfield, Ohio
Mark Henderson Congdon, Charlottesville
Julius Conn, Charlottesville
Evangelos Constantaras, Reading, Pa.
Macon Smiley Couk, Richmond
James Parker Cross, Jr., Ft. Lewis, Wash.
Hector Jose Curiel, Monticello, N. Y.
Frederick Carr Davis, Jr., Warwick
Thomas Dewey Davis, Jr., Richmond
Leonidas J. DeAlbuquerque, Pittsburgh, Pa.
Mauricio Joao DeAlmeida, Beckley, W. Va.
John Richard Deem, Clarksburg, W. Va.
Barbara A. H. DeHaven, Akron, Ohio
Edward Ralph DeRamon, New York, N. Y.
Ludovic Jules DeVocht, Alexandria
Oscar Diaz, Cape May Court House, N. J.
Eugene Charles Divita, Montgomery, W. Va.
Allan Lee Drash, St. Petersburg, Fla.
James Wayland Dunn, Capron
John Wesley Emerick, Winchester
Robert Keiji Emy, Richmond
Freeman Epes, Decatur, Ga.
William Swadley Erwin, Charlottesville
Russell Dougherty Evett, Norfolk
Walter P. E. Exelby, Petersburg
Luigi Farano, Orangeburg, N. Y.
George Allan Ferre, Great Lakes, Ill.
Joseph Hodges Fitzgerald, New York, N. Y.
Jack Ronald Flanary, St. Petersburg, Fla.
William Sidney Foreman, Jr., Charlottesville
Kurt Johannes Fox, Coral Gables, Fla.
Antonio Aranda Garzon, Orange, N. J.
Hunter M. Gaunt, Jr., Winchester
James Trigg Gillespie, Chelsea, Mass.
Julian Lee Givens, Roanoke
Charles Henry Gleason, Iowa City, Iowa
Robert Lee Glenn, Montgomery, W. Va.
Marvin Hirsh Goldstein, Richmond
Leslie Paul Gondor, Ontario, Canada
Ulysses Soriano Gonzales, Akron, Ohio
James Russell Green, Jr., Richmond
Walter Franklin Green, III, Harrisonburg
Robert Francis Haden, Arvonia
Henry Bentley Hahn, Jr., Richmond
Luther Clark Hansbarger, Huntington, W. Va.
Hobart Garfield Hanson, Charlottesville
Stuart Horsley Harris, Jr., Lynchburg
Gilbert Lee Hendricks, Jr., Richmond
Dietrich Walter Heyder, Durham, N. C.
James Robert Hicks, II, Spotsylvania
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Maria A. M. Huk, Willard, N. Y.
Michael Janis, Fort Dix, N. J.
John Walker Jones, Rustburg
Jamshid Kavoussi, Brooklyn, N. Y.
Henry Joseph King, Richmond
Stacy Hilburn Kinlaw, Richmond
Charles Wm. Kinzer, Jr., Richmond
Marshall Klavan, Baltimore, Md.
Elizabeth M. E. Knopp, Sykesville, Md.
Walter Knopp, Sykesville, Md.
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Percy Wootton, Roanoke
Heins Juergen Wustrow, Washington, D. C.
William Hao Yao, Newton, Mass.
Charles Roames Young, Hebron
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Walter Charles Beck, Roanoke
James Edward Boland, Washington, D. C.
Robert James Brennan, Annandale
James Leo Clifford, Wise
Salvador J. Cosimano, Jr., Washington, D. C.
Hugh Howard Crawford, Norfolk
George Dewey Delaughter, Jr., Durham, N. C.
Charlotte Patricia Donlan, Bethesda, Md.
William Thomas Driebe, Arlington
John McIver Ervin, Jr., Cheraw, S. C.
Eugene Micheaux Evans, Jr., Danville
William Joseph Evans, Washington, D. C.
Willard Ray Ferguson, Danville
Louis Goldstein, Arlington
Thomas Alphonse Gonder, McLean
Thomas Leonard Gorsuch, Waynesboro
James Eugene Grimes, Fredericksburg
Allan Hall, Annandale
Robert Howe Harmon, Washington, D. C.
Mardock Head, Warrenton
Alan Hecht, Richmond
Howard Thompson Holden, Charlotte, N. C.
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Franklin Stith Kinchelea, Jr., Richmond
Herbert E. Lane, Jr., Falls Church
Edward Malcolm Macon, Vienna
Ralph Burton Maffey, Catawba Sanatorium
Joanna C. Maiden, Winston-Salem, N. C.
William Farlow Maloney, Richmond
Cornelius F. Matthews, Martinsville
Charles Wallace McNitt, Cobbs Creek
Robert Edward Muskgrave, Danville
Arthur Judson Nash, Clifton Forge
Fortunato Joseph Padua, Norfolk
Robert Chester Patton, Craig AFB, Ala.
Herman Howard Pinkerton, Jr., Abingdon
Charles Harris Powell, Woodbridge
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Charles Willis Sensenbach, Wise
Lee Weldon Shaffer, Jr., Roanoke

Joseph Walter Siewicz, Falls Church
Melvin Ross Simpson, Norfolk
Wesley Graham Stephens, Boones Mill
Herman D. Stevens, Newport News
Joseph Marion Straughan, Norton
Howard Pettit Treichler, Alexandria
William Maclohen Trible, Washington, D. C.
Frederick Edward Vultes, Jr., Richmond
Glenn Ferrell Watts, Wise
Walter Paul Wise, Manassas

Dr. Harold Goodman,

Richmond, announces the opening of his office at 104 Berrington Street for the private practice of radiology. He recently resigned his position as chief of the radiology service at McGuire Veterans Administration Hospital.

Southern Medical Association Building.

The Ground-Breaking Ceremony for the new headquarters of this Association was held on August 4th. The Association expects to occupy the building not later than March 15, 1958.

Dr. Charles M. Nelson,

Associate Professor of Clinical Urology at the Medical College of Virginia, spoke to the members of the Staff of the Northampton-Accomack Memorial Hospital on September 4th. His subject was The Treatment of Bladder Tumors with Particular Reference to the Use of Radioactive Gold. This lecture is a part of the Hospital's program of Continuation Education.

St. Luke's Hospital Has 75th Anniversary.

The 75th anniversary celebration of St. Luke's Hospital, Richmond, was held September 6-9. Dr. W. P. Barnes of the Staff was the principal speaker at the opening session, and Dr. W. T. Thompson, Jr., a former Staff member and now chief of Medicine at McGuire VA Hospital, was the speaker at the banquet.

St. Luke's was founded in 1882 by the late Dr. Hunter Holmes McGuire, chief surgeon in the Stonewall brigade in the Civil War. The first training school for nurses in Virginia was established there in 1886. The Hospital now has 92 beds and a student nurse capacity of approximately 40.

Dr. Collinson P. E. Burgwyn

Has completed residency training at North Carolina Baptist Hospital and Bowman Gray School of Medicine in Winston-Salem. He has located at 1213 West Franklin Street, Richmond, where he will practice obstetrics and gynecology.

Dr. Rose M. Morecock

Was assigned by the State Department of Health on September 1st as assistant to Dr. W. P. Jackson, director of the health district comprising the counties of Bedford, Craig, Franklin and Roanoke.

Dr. W. C. Caudill,

Pearisburg, has been named president of the United Fund drive of Giles County. Participating agencies include the American Red Cross, the Boy Scouts of America, Girl Scouts, Children's Home Society and Mental Health Society.

The Southeastern Allergy Association

Will hold its 12th Annual Meeting at the Fort Sumter Hotel, Charleston, N. C., November 1 and 2. The program will include papers by Dr. Raymond Arp, Atlanta, Ga., on Cardiac Allergy; Dr. William A. Thornhill, Jr., Charleston, W. Va., on Allergic Vasculitis, Dr. Oscar Swineford, Jr., Charlottesville, on Immunology; Dr. Jack M. Rose, Houston, on Hodgkin's and Allergy; Dr. William B. Sherman, New York, on Non-Immunologic Factors in Allergic Reactions; Dr. John Guerrant, Charlottesville, on Mechanisms Concerned with Dyspnea in Patients with Pulmonary Disease; Dr. Oscar Hansen-Pruss, Durham, N. C., on Tranquilizers in Patients with Emphysema; Dr. Orville Withers, Kansas City, Mo., on The Problem of Food Allergy; Dr. Lamar Peacock, Atlanta, Ga., on Potassium Iodide Sensitivity; Dr. Paul Coughlin, Tallahassee, Fla., on Vitamin and Mineral Balance; and Dr. Carl Jones, Atlanta, Ga., on Insection Allergy.

Dr. Clarence Bernstein, Orlando, Fla., is president of this Association.

American Association of Medical Assistants.

At the annual meeting of this Association held recently in California, Virginia was represented by four members from Lynchburg. They were Mrs. W. G. Dove, Miss Helen Cyrus, Miss Ronnie Murphy, and Mrs. E. S. Carwile.

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For Rent.

Brick office in Painter, Virginia. Due to illness doctor has retired from practice. Contact Mrs. William L. Cosby, Painter, Va. (*Adv.*)

Wanted.

Two full-time general practitioners or psychiatrists to work on psychiatric service of 2000-bed hospital, in medical and cultural locality. Full-time salary range $6000-$10,320 (plus 25% for certification) with retirement, insurance, leave and other government benefits. Citizenship and license by some state required. Contact Manager, VA Hospital, Roanoke 17, Va. (*Adv.*)

Obituaries . . . .

Dr. Joseph Spencer DeJarnette,

Widely known in the field of mental health, died September 3rd, having been in declining health for several years. He was ninety-one years of age and a graduate of the Medical College of Virginia in 1888. After his graduation, Dr. DeJarnette joined the staff of Western State Hospital, later becoming superintendent. He served in this capacity until 1953. He also served as superintendent of the DeJarnette State Sanatorium from 1932 to 1947.

Dr. DeJarnette was instrumental in getting the Virginia sterilization law passed in 1924, the first such law to be upheld by the United States Court of Appeal. He also was the prime mover in getting a state law for the care of mentally deficient persons passed in 1926.

Dr. DeJarnette was a Life Member of The Medical Society of Virginia, having joined in 1889. Three sisters and a brother survive him.

Dr. Marion Norwood King,

Prominent Norfolk physician, died September 8th, at the age of eighty-two. He was a native of North Carolina and a graduate in medicine from the University of Maryland in 1898. Dr. King practiced in Texarkana, Ark., and Durham, N. C., before locating in Norfolk, where he had been for thirty-seven years. He served with the U. S. Army Medical Corps during World War I. Because of failing health, Dr. King had retired from active practice in 1949.

Dr. King was a Life Member of The Medical Society of Virginia, having joined in 1900. His wife and a sister survive him.

Dr. Benjamin Blanton Dutton,

Prominent physician of Winchester, died August 22nd, after a long illness. He was a native of Middlesex County and sixty-eight years of age. Dr. Dutton graduated from the Medical College of Virginia in 1913 and after his internship, began his practice in Winchester. He was in Service during World War I and was awarded the Silver Star for outstanding service. On the occasion of his sixty-second birthday, the citizens of Winchester honored Dr. Dutton at a public reception and the Mayor declared the day to be set aside as Dr. Dutton Day "to do honor to a useful and beloved citizen".

Dr. Dutton was a member of the Board of Directors of the Winchester Memorial Hospital and a former member of the hospital executive committee. He had been a member of The Medical Society of Virginia for forty-three years. His wife and a son survive him.

Dr. Elisha Barksdale,

Widely known Lynchburg surgeon, died September 12th after a long illness. He was a native of Halifax County and seventy-six years of age. Dr. Barksdale was a graduate of the Medical College of Virginia in 1904. He was a pioneer in the field of public health and well known as a speaker and writer on scientific subjects. Dr. Barksdale was among those responsible for the founding of the Lynchburg General Hospital and served as its first chief of the staff. He was the first president of the Virginia Baptist Hospital staff and was on the surgical staffs of Memorial and Guggenheimer Memorial Hospitals.

Dr. Barksdale was a charter member of the Virginia governing committee of Gorgas Memorial Institute of Tropical and Preventive Medicine. He was a Life Member of The Medical Society of Virginia, having joined in 1907.

Three daughters, two brothers and three sisters survive him.

Dr. Thomas David Morewitz,

Prominent physician of Hampton, died September 5th after a long illness. He was sixty-five years of age and a graduate of the former University College of Medicine, Richmond, in 1913. Dr. Morewitz was city physician for Newport News for a number of years. During World War I he was a captain in the Medical Corps of the Army.

Dr. Morewitz had been a member of The Medical Society of Virginia for forty-four years. A sister and two brothers survive him.

Dr. Sidney Trattner,

Richmond, died August 29th at his summer home in Maine. He was sixty-five years of age and a graduate of the New York University College of Medicine in 1914. Dr. Trattner specialized in ophthalmology and had been head of the Ophthalmologist Association of the Virginia Commission for the Visually Handicapped. He served as a medical officer during World War I.

Dr. Trattner had been a member of The Medical Society of Virginia for thirty-seven years. His wife, two daughters and a son survive him.

Dr. Stewart McBryde,

Arlington, died July 10th of congestive heart failure. He was born in Lexington in 1887 and graduated from the Medical College of Virginia in 1912. During World War I, Dr. McBryde served in France as a Captain in the Medical Corps. He was a former president of Physicians' Hospital in Warrenton. Dr. McBryde had been a member of The Medical Society of Virginia for thirty-two years.

His wife, a son, a step-son and a step-daughter survive him.

Dr. George Walne Leavell,

Well known Bristol physician, died August 12th. He was sixty-nine years of age and a graduate of the University of Louisville, School of Medicine, in 1911. Dr. Leavell was appointed by the Baptist Foreign Mission Board in 1912 to go to China as a medical missionary. He served 23 years in Wuchow, South China, and built and served in the Stout Memorial Hospital. Because of ill health, Dr. Leavell returned to the United States in 1934 and opened his practice in Bristol.

Dr. Leavell was a past governor of the District Rotary Club. He had been a member of The Medical Society of Virginia for twenty-one years.

Dr. Edgar Allan Baron,

Well known physician of Hampton, died July 9th of a spontaneous subarachnoid hemorrhage. He was a native of Montreal, Canada, and forty-seven years of age. Dr. Baron graduated from McGill University in 1935. Since 1947 he had been Pathologist at the Veterans Administration Hospital at Kecoughtan. He had also been an active member of the medical staff of Dixie Hospital in Hampton.

Dr. Baron had been a member of The Medical Society of Virginia since 1947. His wife and two children survive him.

Dr. Julien Dabney Jackson,

Norfolk, died August 15th, at the age of sixty-seven. He was a graduate of Howard University in 1914 and began his practice in Richmond, then moved to Hampton, and finally to Norfolk. Dr. Jackson was one of a small group of Negro doctors who worked tirelessly to help establish the Community Hospital in Norfolk, and was associated with the x-ray department at the hospital. Dr. Jackson joined The Medical Society of Virginia in 1955.

His wife and two sons survive him.

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1. Settel, E.: Rolicton® (Aminoisometradine), a New, Nonmercurial Diuretic, Postgrad. Med. *21*:186 (Feb.) 1957.
2. Assali, N. S.: Personal communication, May 28, 1956.



Normal glomerulus, showing arteriole musculature, glomerular epithelial podocytes, and "epitheloid" muscle cells of vas efferens.

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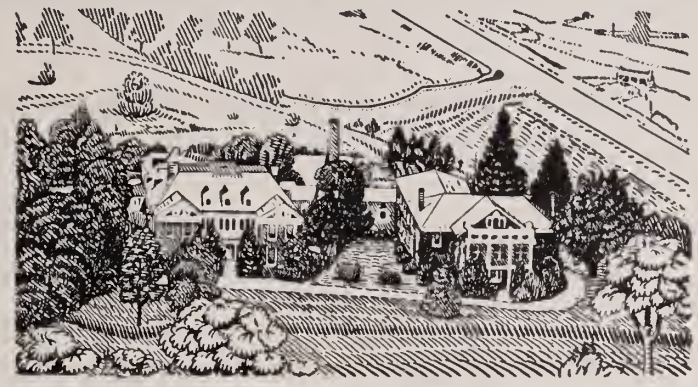
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The next meeting of the Virginia Board of Medical Examiners will be held in the Richmond Hotel, Richmond, Virginia, December 4, 1957. The examinations will be held in the same hotel December 5, 6, and 7, 1957, inclusive. All applications and other documents pertaining to the examinations or to matters to be discussed by the Board must be on file in the Secretary's office on or before Nov. 12, 1957. The Secretary of the Board is Dr. K. D. Graves, 631 First Street, S.W., Roanoke, Virginia.

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1. Kerley, L., and Headlee, C. P.: J. Am. Pharm. A. (Scient. Ed.) 45:82, 1956. 2. Lehr, D.: Special Exhibit, Mod. Med. 23:111, No. 2, 1955. 3. Editorial, J.A.M.A. 160:210, 1956. 4. Bastedo, W. A.: Materia Medica, Pharmacology, Therapeutics and Prescription Writing, ed. 4, Philadelphia, W. B. Saunders Company, 1937, pp. 514, 101.

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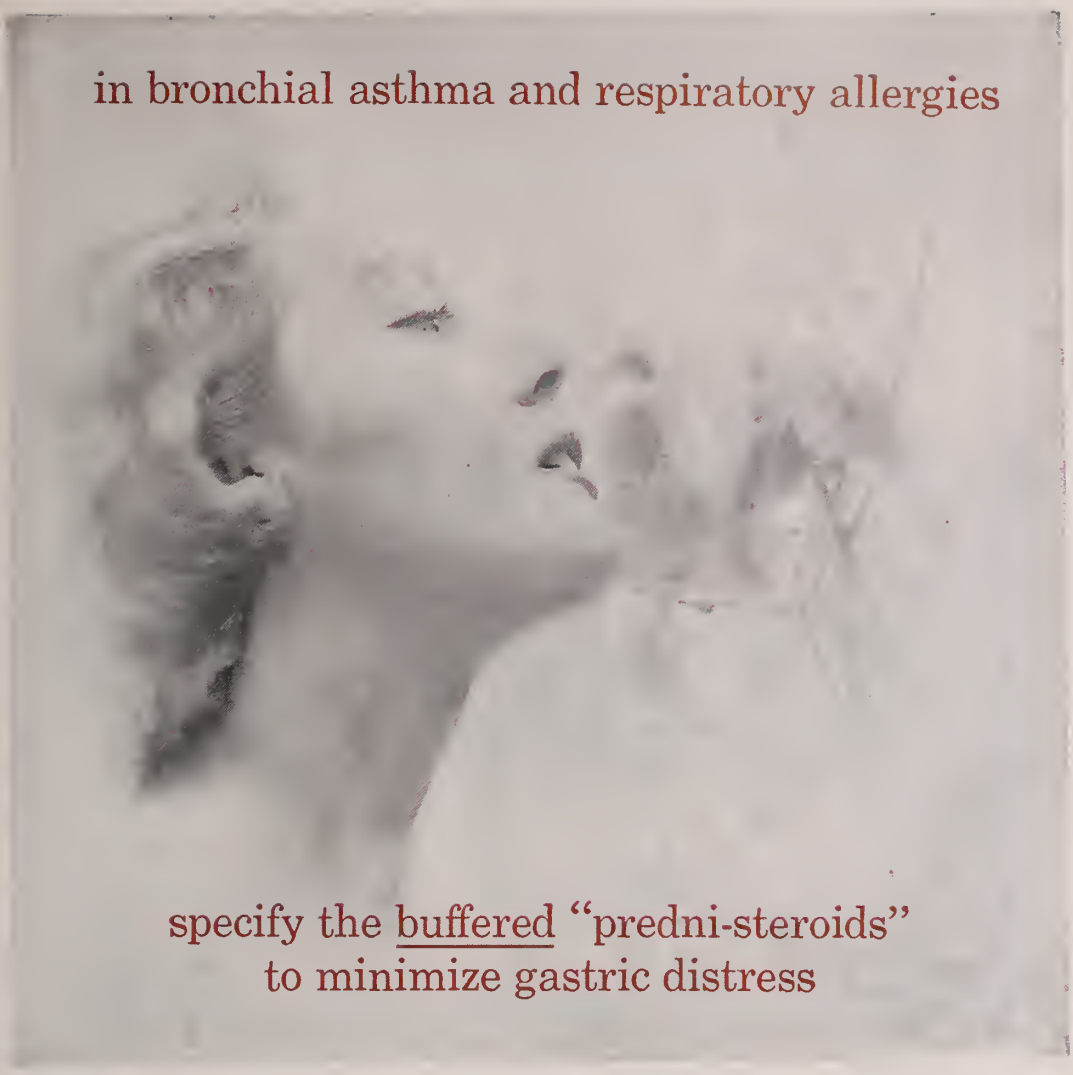
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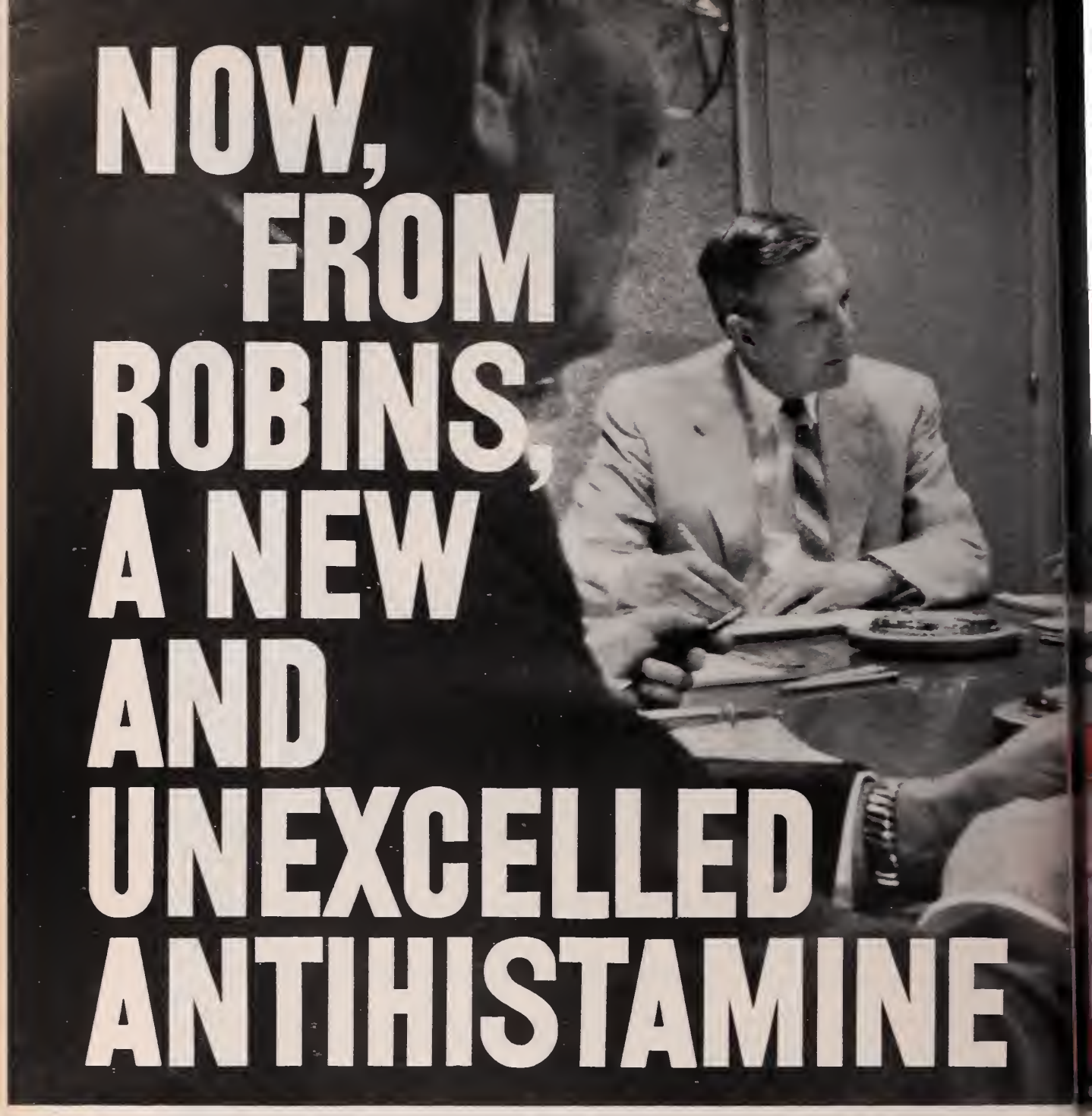
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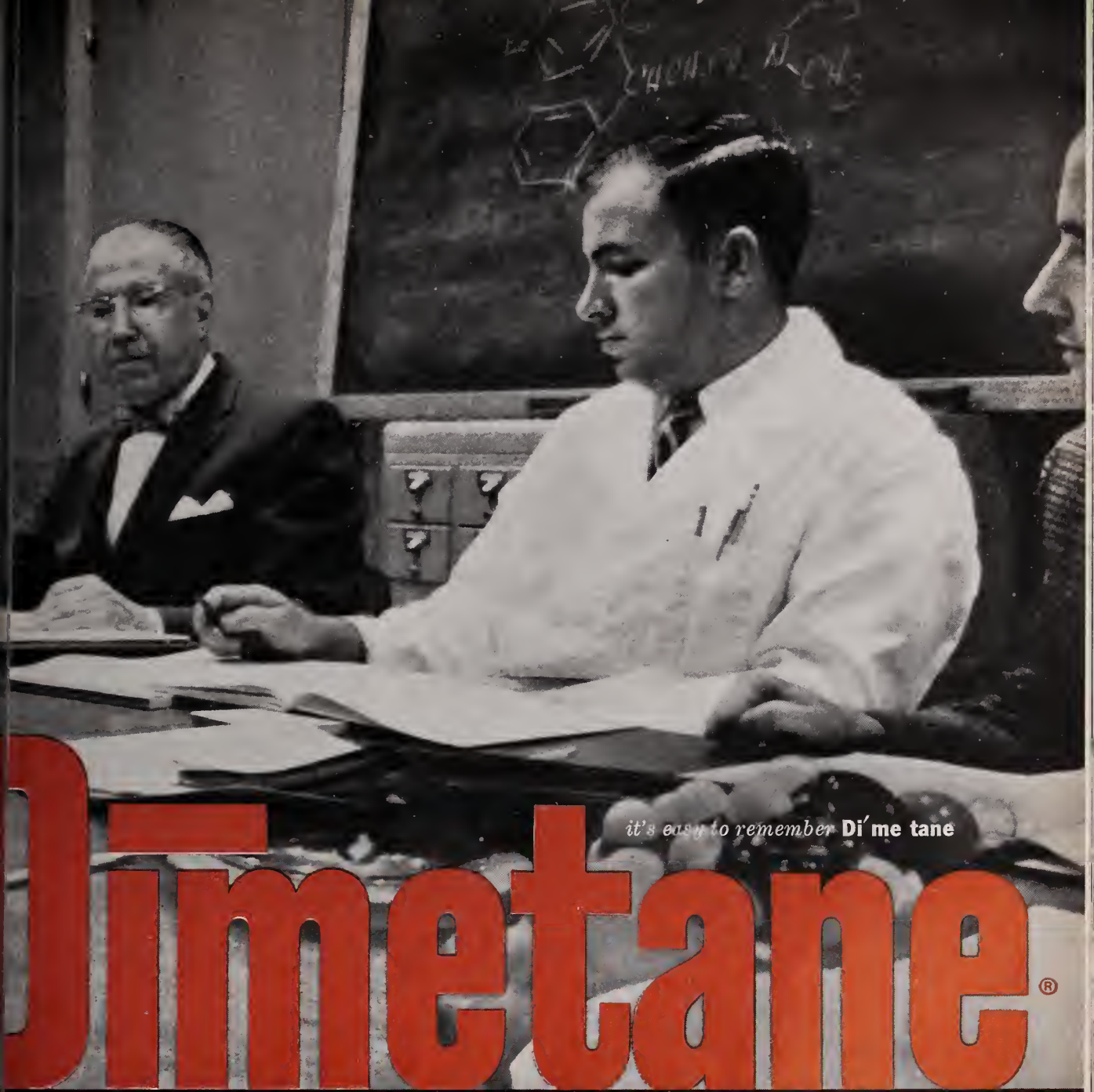
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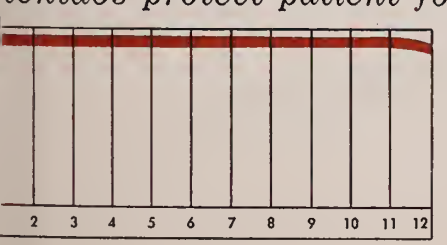
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1. Hodges, F. T.: GP, *14*:86, Nov., 1956.

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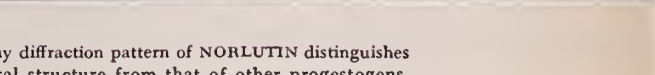
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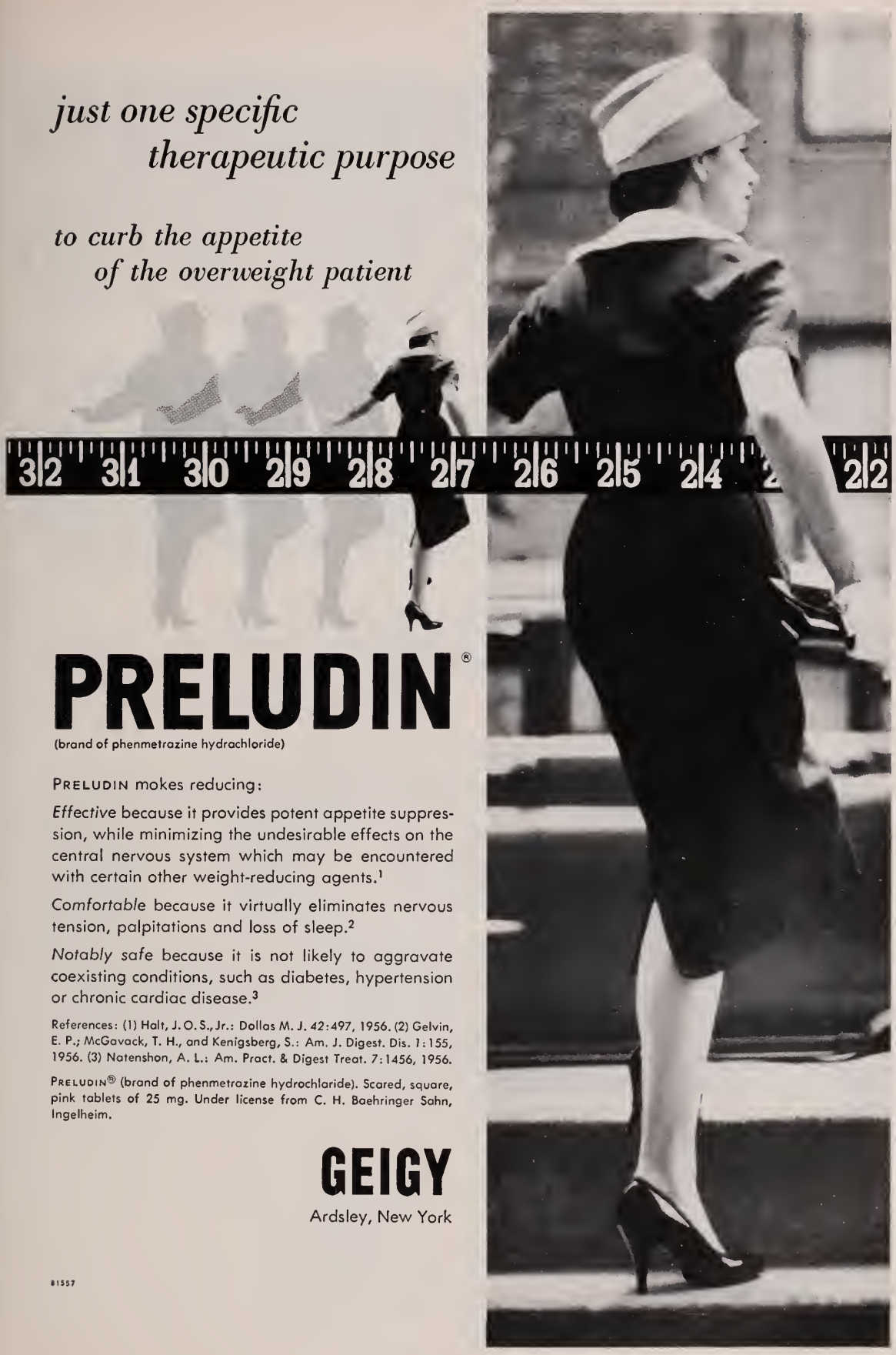
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References: (1) Halt, J. O. S., Jr.: Dallas M. J. 42:497, 1956. (2) Gelvin, E. P.; McGavack, T. H., and Kenigsberg, S.: Am. J. Digest. Dis. 1:155, 1956. (3) Natenshon, A. L.: Am. Pract. & Digest Treat. 7:1456, 1956.

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Each 4 cc. (one teaspoonful) contains:

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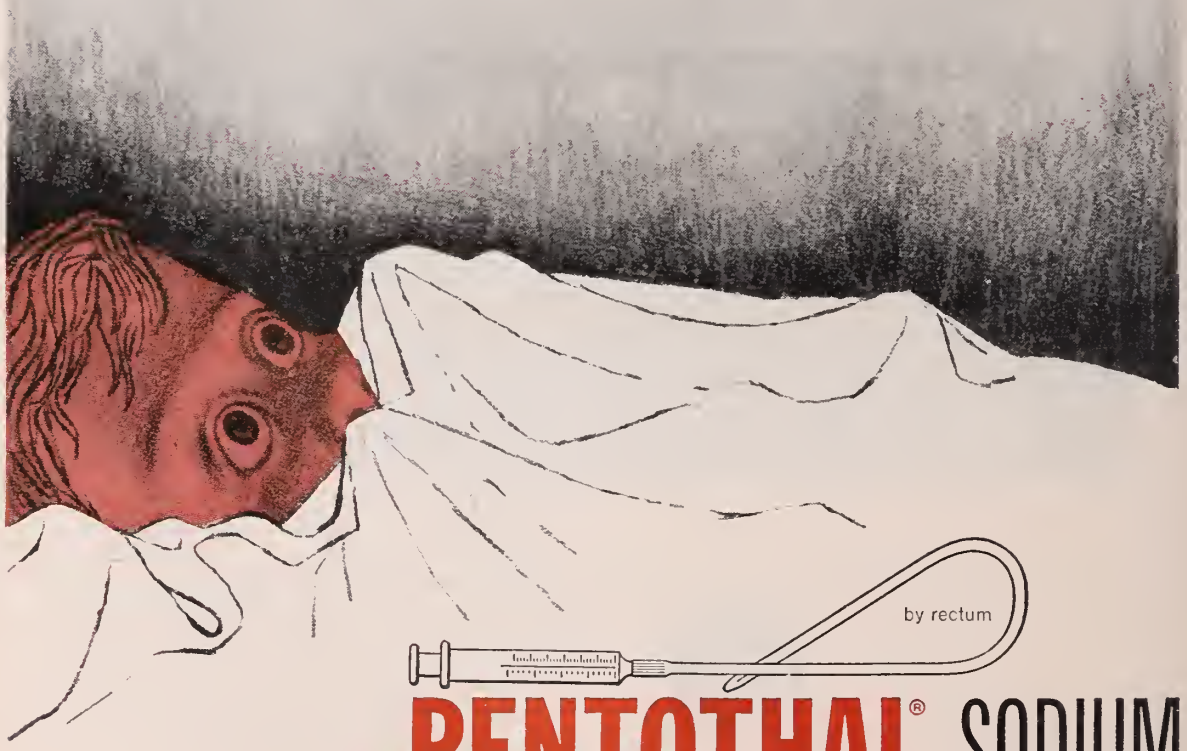
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Syrup

Each teaspoonful (5 cc.) contains:

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Phenacetin	120 mg.
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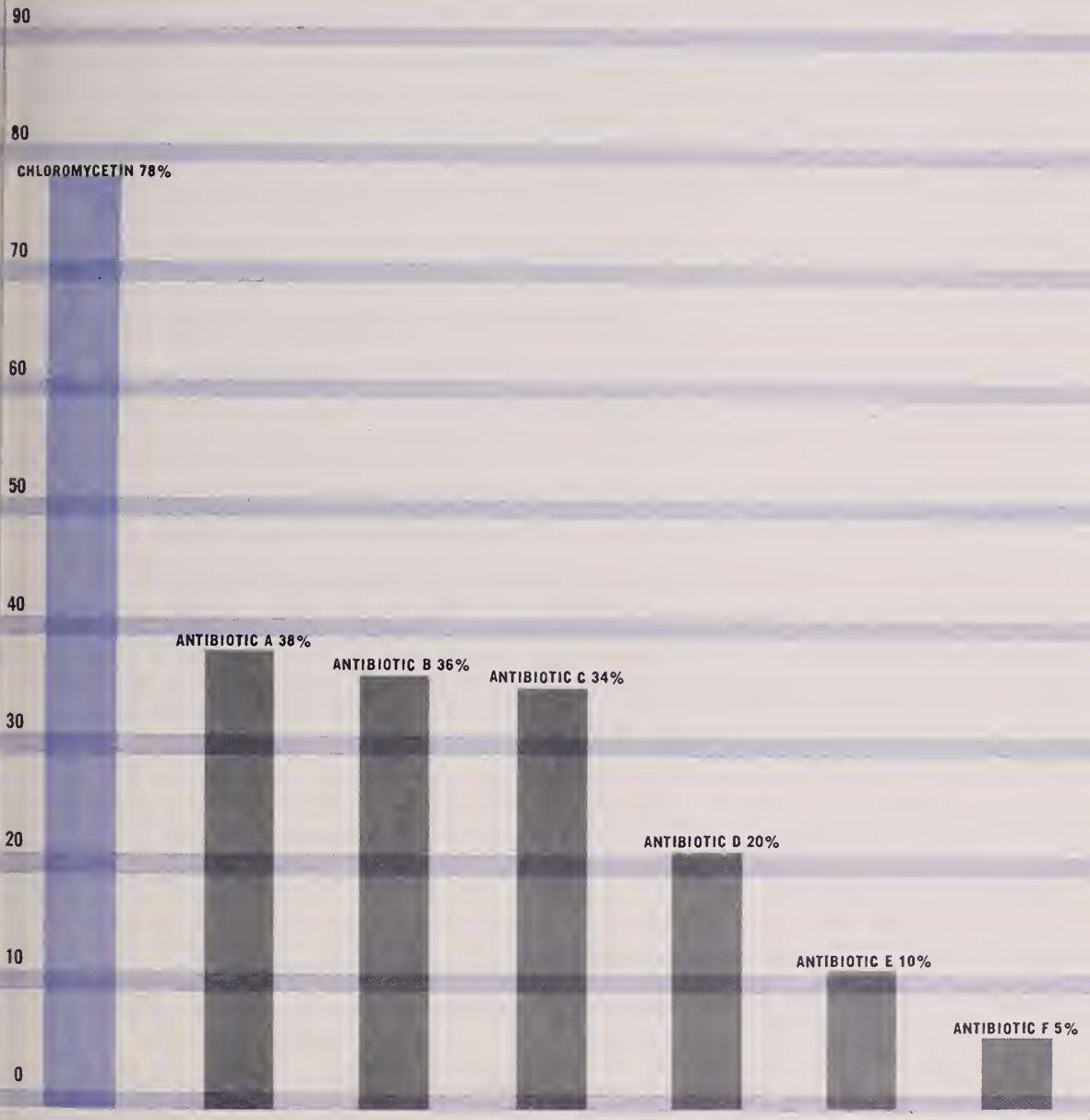
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COMPARATIVE SENSITIVITY OF MIXED PROTEUS SPECIES TO CHLOROMYCETIN AND SIX OTHER WIDELY USED ANTIBIOTIC AGENTS*



*This graph is adapted from Waisbren and Strelitzer.[15] It represents *in vitro* data obtained with clinical material isolated between the years 1951 and 1956. Inhibitory concentrations, ranging from 3 to 25 mcg. per ml., were selected on the basis of usual clinical sensitivity.

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Pablum High Protein Cereal is derived from soy beans, oats, wheat and dried yeast. This new cereal food contains a level of active assimilable protein, 35%, much higher than that commonly present in cereal grains. It helps to keep baby trim. It satisfies baby's hunger over longer periods of time than even foods rich in carbohydrate.

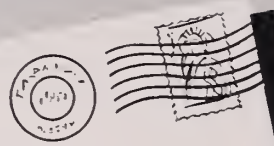
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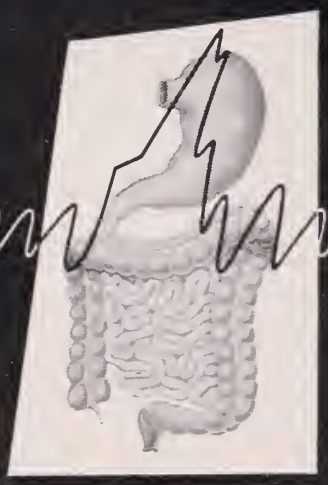


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Drug Firms Speed Vaccine Output, Bu Will the U.S. Need

Asiatic Virus Raises Th Government Buys, I nd Hens Have to H

en Attack, Rapid Sp

8 STUDENTS ON FLIGHTS TO U. S. HAVE ASIAN FLU

New York, Aug. 15 (AP) Laboratory tests on e foreign exchange student arrived Aug. 8 show they victims of Asiatic flu, the health department repo today. The eight arrived plane from Europe.

Twenty-nine other stud suffering from influenza rived Tuesday from Rot dam on the ship Arosa Sky. One, Nicholas Memmos, Greek exchange student, die yesterday. Six of these students were released today the others are to be re tomorrow. It has not termined whether died from Asiatic

Pea vac izat flov the ority States

THE INFLUE

How Deadly Will it e What Can We Do a

IF

Answ

A ne —is sho around e now ha

The War on Mutant A

If Florence was in the grip of an epi- emic of colds, coughs and fevers, astrolo- ers . . . declared that it was caused by he influence of an unusual conjunction of lanets. This sickness be known as "infl

—Chronicles of 1200-1470.

To combat new r uence," a worldwide his week in respons om the Far East. St the World Health eva, which collects i om around the globe pecimens of the ene ons. In more than a cluding those of th

Asian Flu: the Outlook

Asian influenza will hit the U.S. this fall before mass immunization can be effective, and the nation faces an epidemic which may strike 15 million to 30 million people. The disease is relatively mild (in no way comparable to the killing "Spanish flu" of 1918-19), and is likely to cause only a small number of deaths among the feeble young and enfeebled old. But it may compel 10% to 20% of the population in affected areas to tak thus

W quie a co pect Ser pop

U.S. Fighting As

The War On Asiatic Flu

There's cause for concern about Asiatic flu, but scientists and public health officials see no reason for anyone to panic.

First shipments of the vaccine against the new influenza strain have arrived in Chicago, setting off a flood of telephone calls from worried patients to doctors, and from doctors to drug suppliers. This is a nor pattern of mass fear and is understan The of the

Even though Salk vaccine priorities were necessary, the regulation produced administrative headaches, public complaints and probably a gray, if not a black market. When regulation i invoke it. would

PUBLIC HEALTH

Influenza N

➤ INFLUENZA, one of the most u dictable of communicable diseases, is ing "on cat feet" across the nation now. It has already struck once this in mild epidemic form at an Air Base in Colorado. When and how se it will strike again is a perennial rid public health authorities.

It will probably not lie dormant the rest of the winter months. At the there will be sporadic outbu throughout the country. If

to counteract
complications from

"ORIENTAL FLU"

)EMIC
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CATCH "ASIATIC" FLU—
the New Virus Threat From Orient

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effective against staph-, strep- and pneumococci

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Phenacetin	120 mg.
Caffeine	30 mg.
Salicylamide	150 mg.
Chlorothen Citrate	25 mg.

Syrup

Each teaspoonful (5 cc.) contains:

ACHROMYCIN® Tetracycline equivalent to tetracycline HCl	125 mg.
Phenacetin	120 mg.
Salicylamide	150 mg.
Ascorbic Acid (C)	25 mg.
Pyrilamine Maleate	15 mg.
Methylparaben	4 mg.
Propylparaben	1 mg.

Available on prescription only

The ACHROCIDIN formula is particularly valuable in treating acute respiratory infections during epidemics and other outbreaks.

In addition to *rapid symptomatic improvement,* ACHROCIDIN offers *prompt control of the bacterial superinfection* frequently responsible for such disabling complications as pneumonia, otitis media, sinusitis, bronchitis, pneumonitis to which the patient may be vulnerable.

The comprehensive ACHROCIDIN formulation includes both *ACHROMYCIN* Tetracycline — broad-spectrum antibiotic action — and *analgesic components* recommended for rapid relief of malaise, headache, muscular pain, pharyngeal and nasal discharge.

Adult dosage for ACHROCIDIN Tablets and new, caffeine-free ACHROCIDIN Syrup is two tablets or teaspoonfuls of syrup three or four times daily. Dosage for children according to weight and age.

ACHROCIDIN*

TETRACYCLINE-ANTIHISTAMINE-ANALGESIC COMPOUND

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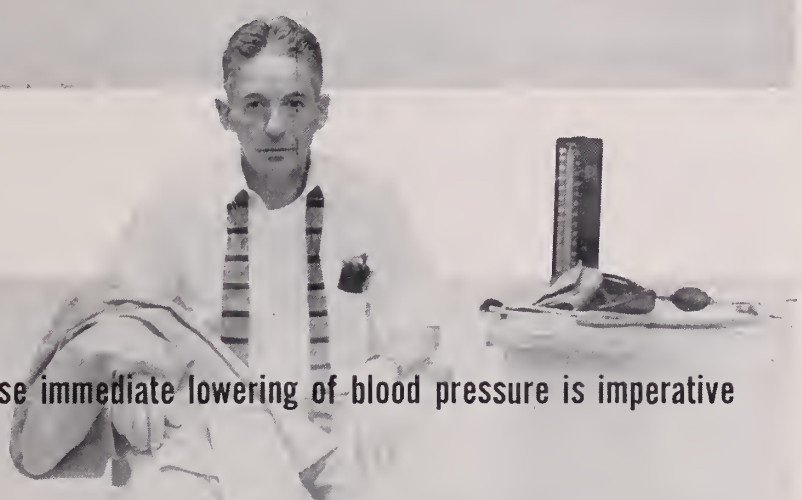
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For Speedy Return To Normal Nutrition

Meat...

in the congestive phase of cardiac disease

Meat fits well into the moderate-protein, restricted-sodium, acid-ash diet currently recommended for many patients with congestive cardiac failure.[1]

The protein of meat—in the proportionate arrangement of its essential amino acids—closely approaches the quantitative proportions needed to promote human tissue synthesis and repair. For this reason lean meat proves important in maintaining positive nitrogen balance without excessive protein intake.

The sodium content of meat prepared without added salt is relatively low. Per 100 grams, beef muscle meat shows approximately 50 mg. of sodium, lamb 90 mg., pork 60 mg., and veal 50 mg.[2]

The acid ash of meat aids in the promotion of diuresis.

The easy digestibility of meat is a prime requisite of foods specified for the patient with congestive cardiac disease.

In addition to these important features, meat contributes other nutritional factors essential in any convalescence —the B vitamins thiamine, riboflavin, niacin, pantothenic acid, B_6, and B_{12}, and the minerals iron, phosphorus, potassium, and magnesium.

1. Odell, W. M.: Nutrition in Cardiovascular Disease, in Wohl, M. C., and Goodhart, R. S.: Modern Nutrition in Health and Disease, Philadelphia, Lea & Febiger, 1955, p. 699.
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The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.

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Drug Must Meet High Standards of Efficacy and Safety

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An editorial in the Journal of the American Medical Association states that sulfonamides are successful in 90 per cent of urinary tract infections, and ". . . should be tried first."[2] There are many properties a sulfonamide should possess before it can be claimed to be efficacious and safe. "Thiosulfil,"® brand of sulfamethizole, is considered to be one of the ". . . most acceptable sulfonamides for treatment of urinary tract infections . . ."[3]

Broad Bacteriostatic Index

"Thiosulfil" is effective against most gram negative and gram positive organisms commonly found in the urinary channels.

High Plasma — Urine Levels

"Thiosulfil" is rapidly absorbed and excreted, achieving high antibacterial levels in the urine and throughout infected tissue, with negligible penetration into red blood cells.

High Solubility

"Thiosulfil," in both the active and acetylated forms, is highly soluble in urine over a wide pH range, thus permitting effective action with minimal side effects. Alkalinization is not required; fluids may be restricted rather than forced.

Low Acetylation

"Thiosulfil" is virtually unacetylated. As much as 90-95 per cent remains in the free therapeutically active form. Virtually all of a given dose is therefore available for antibacterial action.

In a long-term clinical study, patients with incurable chronic urinary infections were kept symptom free for as long as five or six years on a maintenance dose of one or two tablets of "Thiosulfil" daily.[4] In another evaluation, 20 patients were given 25-100 grams of "Thiosulfil" over a period of 20-90 days without incidence of side reactions.[5] Goodhope[6] reports that during 30 months of clinical use with "Thiosulfil," no evidence occurred of exanthemata, urticaria, emesis, fever, hematuria and crystalluria.

Recommended Dosages: 0.5 Gm. four times daily. The pediatric dosage is 30 to 45 mg. daily per pound of body weight. If voiding occurs during the night, an extra half-dose should be given. Fluids may be restricted rather than forced.

Availability: Tablets, 0.25 Gm. (bottles of 100 and 1,000). Suspension, 0.25 Gm. per 5 cc. (bottles of 4 and 16 fl. oz.).

Bibliography on request.

AYERST LABORATORIES
New York, N. Y. • Montreal, Canada

5734

Current Concepts in

Feeding Newborns

Successful infant feeding depends on effective planning of the newborn's nutritional regimen. The first feeding, 12 hours after birth, may consist of a prelacteal solution of KARO® Syrup. This should be offered in one or two ounce amounts at two hour intervals for 24 to 48 hours to fulfill the high water requirement during the first week of life. Breast feeding may be initiated on the second day for five minute intervals to obtain colostrum and stimulate breast secretion. However, the prelacteal feeding is continued thereafter and between nursings.

Artificial feeding is offered on the second day if breast feeding is denied. Small infants are fed at three hour intervals and large infants at four hour intervals. The initial formula usually is a low caloric milk mixture to enable gradual adaptation of the feeding to the infant's tolerance. Concentration of the formula is gradually increased at intervals of several days, in the absence of digestive disturbances. The infant should be fed in a semi-reclining position, burped during and after feeding, and kept on his right side or abdomen undisturbed for an hour.

The same problems of infant feeding recur from generation to generation, but solutions may differ with each era. The carbohydrate requirement for all infants is as completely fulfilled by KARO Syrup today as a generation ago. Whatever the type of milk adapted to the individual infant, KARO Syrup may be added confidently because it is a balanced mixture of low molecular weight sugars, readily miscible, well tolerated, palliative, hypoallergenic, resistant to fermentation in the intestine, easily digestible, readily absorbed and non-laxative. It is readily available in all food stores.

Rx FIRST FORMULAS FOR NEWBORNS ADAPTED ACCORDING TO TOLERANCE

FORMULA I .....11 cals./oz.
*Whole Milk ..... 8 oz.
Water .....12 oz.
Karo .....½ oz.
3½ oz. x 6 q 4h.

FORMULA I .....12.5 cals./oz.
**Evop. milk ..... 4 oz.
Water .....14 oz.
Karo .....½ oz.
3½ oz. x 6 q 4h.

FORMULA I .....11 cals./oz.
Dried milk .....4 tbsp.
Water .....20 oz.
Karo .....½ oz.
3½ oz. x 6 q 4h.

FORMULA III .....16 cals./oz.
Whole milk .....10 oz.
Water .....10 oz.
Karo ..... 1 oz.
3½ oz. x 6 q 4h.

FORMULA III .....20 cals./oz.
Evop. milk ..... 6 oz.
Water .....12 oz.
Karo ..... 1 oz.
3 oz. x 6 q 4h.

FORMULA III .....18 cals./oz.
Dried milk .....6 tbsp.
Water .....20 oz.
Karo ..... 1 oz.
3½ oz. x 6 q 4h.

FORMULA II .....13.5 cals./oz.
Whole milk ..... 9 oz.
Water .....11 oz.
Karo .....¾ oz.
3½ oz. x 6 q 4h.

FORMULA II .....16 cals./oz.
Evop. milk ..... 5 oz.
Water .....13 oz.
Karo .....¾ oz.
3 oz. x 6 q 4h.

FORMULA II .....14.5 cals./oz.
Dried milk .....5 tbsp.
Water .....20 oz.
Karo .....¾ oz.
3½ oz. x 6 q 4h.

*Whole loctic ocid milk formulos moy olso be prepored from whole cow's milk.

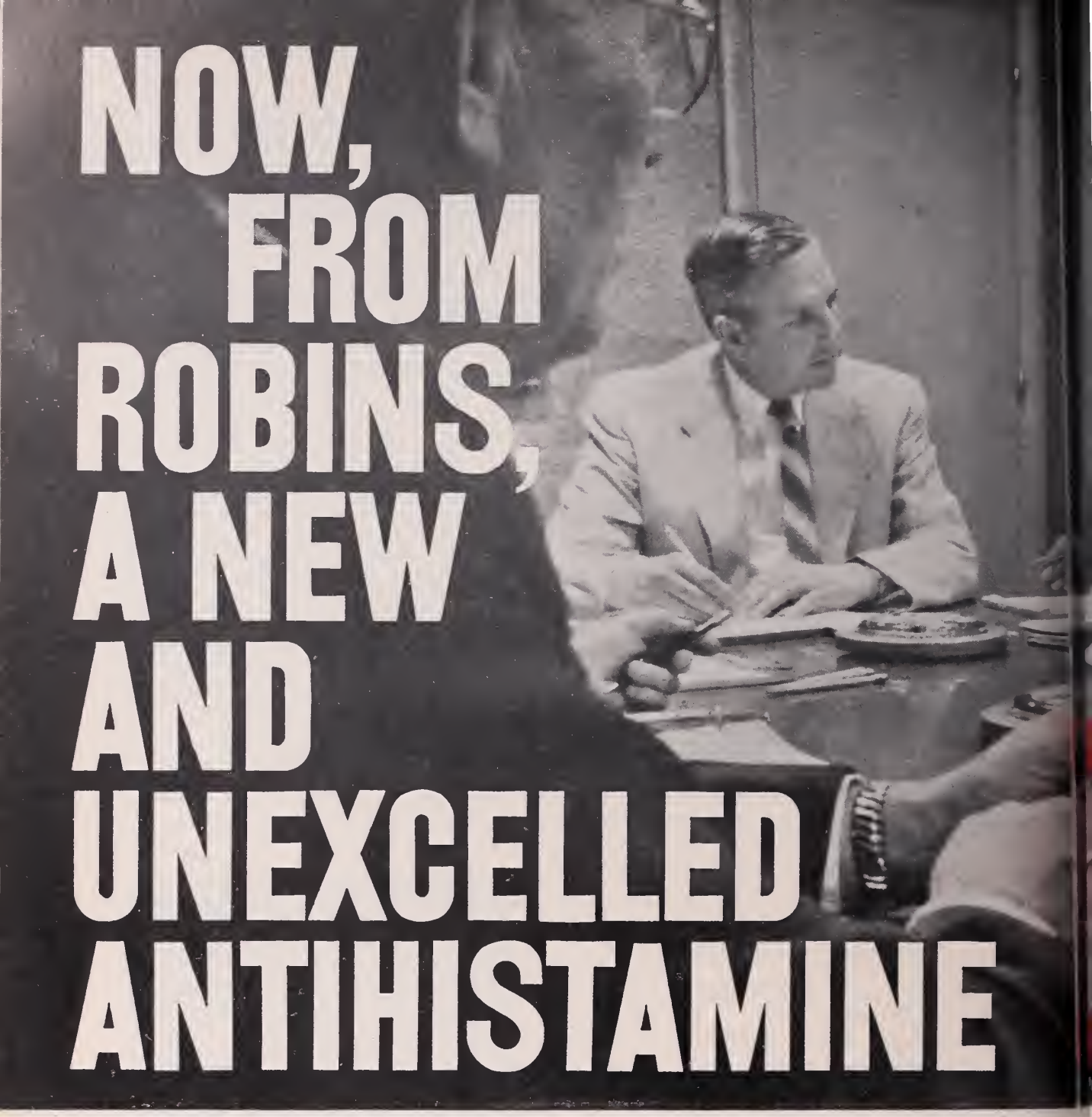
**Whole loctic ocid milk formulos moy olso be prepared from evoporated cow's milk.

Adapted from Nelson's Pediatrics, Saunders, Phila. 1954

MEDICAL DIVISION
CORN PRODUCTS REFINING CO.
17 Battery Place, New York 4, N. Y.



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NOW, FROM ROBINS, A NEW AND UNEXCELLED ANTIHISTAMINE

why Dimetane is the best reason yet for you to re-examine the antihistamine you're now using »*Milligram for milligram*

DIMETANE potency is unexcelled. DIMETANE has a therapeutic index unrivaled by any other antihistamine—a relative safety unexceeded by any other antihistamine. DIMETANE, even in very low dosage, has been effective when other antihistamines have failed. Drowsiness, other side effects have been at the very minimum.

Diagnosis	No. of Patients	Response				Side Effects
		Excellent	Good	Fair	Negative	
Allergic rhinitis and vasomotor rhinitis	30	14	9	5	2	Slight Drowsiness (3)
Urticaria and angioneurotic edema	3	1	1	1		Dizzy (1)
Allergic dermatitis	2		1	1		Slight Drowsiness (2)
Bronchial asthma	1		1			
Pruritus	1		1			
Total	37	15	13	7	2	Drowsiness (5) Dizzy (1) 16.2%

» unexcelled antihistaminic action

From the preliminary **Dimetane Extentabs** studies of three investigators. Further clinical investigations will be reported as completed



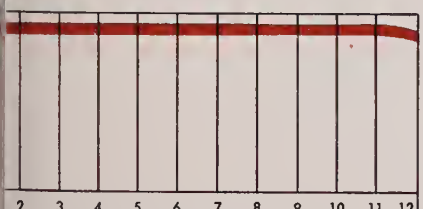
it's easy to remember **Di´me tane**

Dimetane®

EXTENTABS® TABLETS ELIXIR

DIMETANE IS PARABROMODYLAMINE MALEATE – EXTENTABS 12 MG., TABLETS 4 MG., ELIXIR 2 MG. PER 5 CC.

lanket of allergic protection, covering 10-12 irs—with just one Dimetane Extentab » *DIMETANE entabs protect patient for 10-12 hours on one tablet.*



Periods of stress can be easily handled with supplementary DIMETANE Tablets or Elixir to obtain maximum coverage.

Dosage:

Adults—One or two 4-mg. tabs. or two to four teaspoonfuls Elixir, three or four times daily. One Extentab q.8-12 h. or twice daily.

Children over 6—One tab. or two teaspoonfuls Elixir t.i.d. or q.i.d., or one Extentab q.12h.

Children 3-6—½ tab. or one teaspoonful Elixir t.i.d.

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The
Upjohn Company
announces
a major
corticosteroid
improvement



minor chemical changes can mean major therapeutic improvements

Medrol*

The most efficient of all anti-inflammatory steroids

- Lower dosage (⅓ lower dosage than prednisolone)
- Better tolerated (less sodium retention, less gastric irritation)

Supplied: Tablets of 4 mg., in bottles of 30 and 100.

*TRADEMARK FOR METHYLPREDNISOLONE, UPJOHN

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CLINICAL COLLOQUY

My patients complain that
the effect of the pain tablet I prescribe
often wears off in less than 3 hours.

***Why not try the new analgesic
that gives faster,
longer-lasting pain relief?***

You mean something that
doesn't require repeat dosage so often?

***Yes—it's called Percodan.®
It not only works in 5 to 15 minutes but
one tablet sustains its pain-relieving effect
for 6 hours or longer!***

How about side effects?

***No problem. For example,
the incidence of constipation
is rare with Percodan.****

Sounds worth trying—what's the average adult dose?

One tablet every 6 hours. That's all.

Where can I get literature on Percodan?

Just ask your Endo detailman or write to:

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Richmond Hill 18, New York

*U.S. Pat. 2,628,185. PERCODAN contains salts of dihydrohydroxycodeinone and homatropine, plus APC. May be habit-forming. Available through all pharmacies.

ONLY
ONE
TABLET
A
DAY



now... unprecedented Sulfa therapy

KYNEX*

SULFAMETHOXYPYRIDAZINE LEDERLE

New authoritative studies prove that KYNEX dosage can be reduced even further than that recommended earlier.[1] Now, clinical evidence has established that a single (0.5 Gm.) tablet maintains therapeutic blood levels extending beyond 24 hours. Still more proof that KYNEX stands alone in sulfa performance—

- Lowest Oral Dose In Sulfa History—0.5 Gm. (1 tablet) daily in the usual patient for maintenance of therapeutic blood levels
- Higher Solubility—effective blood concentrations within an hour or two
- Effective Antibacterial Range—exceptional effectiveness in urinary tract infections
- Convenience—the low dose of 0.5 Gm. (1 tablet) per day offers optimum convenience and acceptance to patients

NEW DOSAGE

The recommended adult dose is 1 Gm. (2 tablets or 4 teaspoonfuls of syrup) the first day, followed by 0.5 Gm. (1 tablet or 2 teaspoonfuls of syrup) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours. Dosage in children, according to weight; i.e., a 40 lb. child should receive ¼ of the adult dosage. It is recommended that these dosages not be exceeded.

Tablets:
Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup:
Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

[1] Nichols, R. L. and Finland, M.: J. Clin. Med. 49:410, 1957.

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Lederle

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just two tablets
at bedtime

for gratifying
rauwolfia response
virtually free from side actions

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FOR THE ENTIRE RANGE OF RHEUMATIC-ARTHRITIC DISORDERS—from the mildest to the most severe

many patients with MILD involvement can be effectively controlled with

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MULTIPLE COMPRESSED TABLETS

'MEPROLONE'

The first meprobamate-prednisolone therapy



the one antirheumatic, antiarthritic that simultaneously relieves: (1) muscle spasm (2) joint inflammation (3) anxiety and tension (4) discomfort and disability.

SUPPLIED: Multiple Compressed Tablets in three formulas: 'MEPROLONE'-5—5.0 mg. prednisolone, 400 mg. meprobamate and 200 mg. dried aluminum hydroxide gel. 'MEPROLONE'-2—2.0 mg. prednisolone, 200 mg. meprobamate and 200 mg. dried aluminum hydroxide gel. 'MEPROLONE'-1 supplies 1.0 mg. prednisolone in the same formula as 'MEPROLONE'-2.

MSD MERCK SHARP & DOHME
DIVISION OF MERCK & CO., INC.
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Arlidin is often effective when other vasodilators fail... because it brings more blood where needed most.

"The increased blood flow brought about by this drug (ARLIDIN) is predominant and lasting in skeletal muscle and quite negligible in the skin."[1]

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brand of nylidrin hydrochloride N.N.R.

produced improvement in rest pain and ulcers, reduction in swelling and increased walking distance in a majority of 79 patients with...

intermittent claudication

in

arteriosclerosis obliterans

thromboangiitis obliterans
(Buerger's disease)

...also effective in

abdominal aortic occlusion

chronic venous insufficiency



6 mg. tablets and 5 mg. per cc. ampuls and vials
See PDR for dosage and package sizes

1. Murphy, H. L., and Klasson, D. H.: New York St. J. M. 57:1908, June 1, 1957

SAMPLE supply of Arlidin and reprint upon request

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protected by U.S. Patent Numbers 2,661,372 and 2,661,373

new study[1]

shows why

arlidin

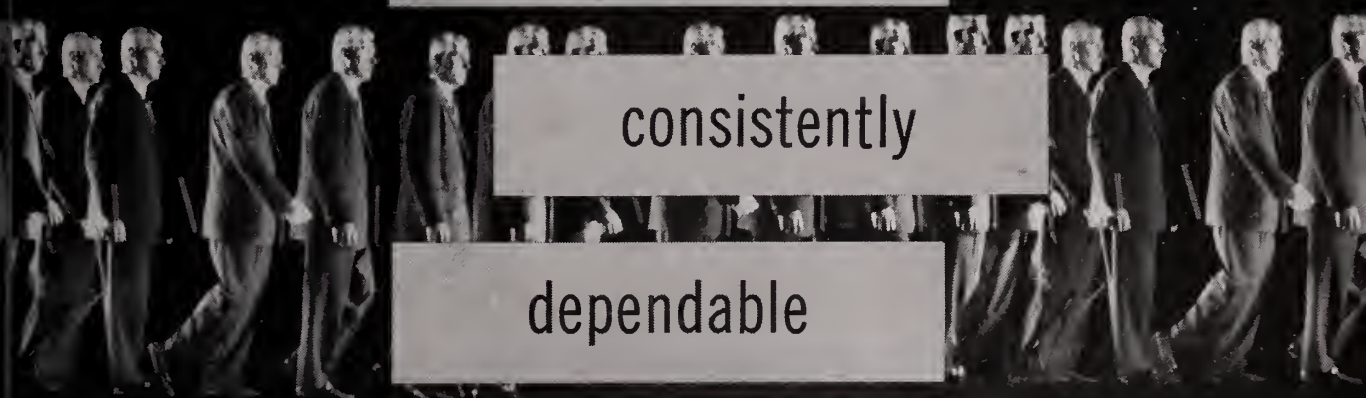
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has provided Safe, Effective Spasmolysis and Sedation

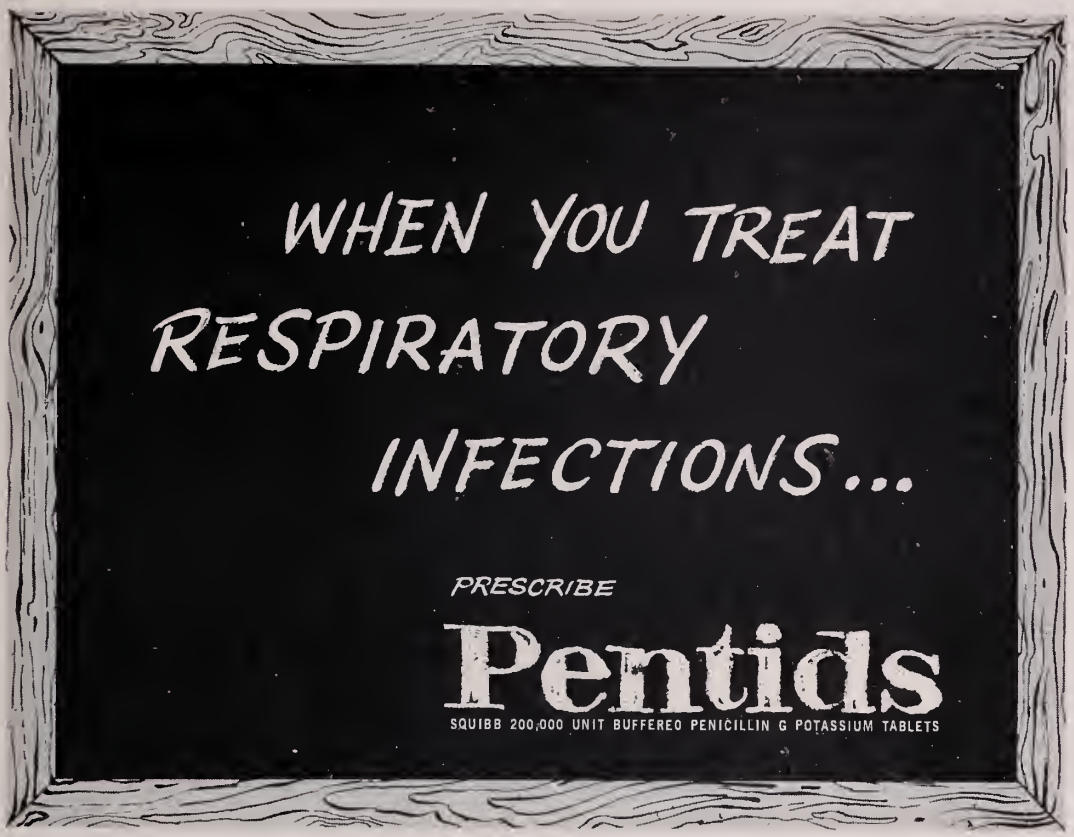
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	Phenobarbital	Belladonna Alkaloids	Supplied
1 BELBARB No. 1 per tablet	¼ gr.	hyoscyamine, atropine, and scopolamine in fixed proportion, approximately equivalent to Tr. Belladonna, 8 min.	Bottles of 100, 500 and 1,000 tablets
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3 BELBARB-B with B Complex Supplement*	¼ gr.		Bottles of 100, 500 and 1,000 tablets
4 BELBARB Elixir per fluidrachm (4 cc)	¼ gr.		Bottles containing 1 pt. and 1 gal.
5 BELBARB Trisules	1 Trisule is equivalent to 3 Belbarb tablets		Bottles of 30 and 100 Trisules

*Thiamine Hydrochloride — 5 mg., Riboflavin — 2 mg., Calcium Pantothenate — 2.5 mg., Pyridoxine Hydrochloride — 0.5 mg., Niacinamide — 10 mg., Vitamin B_{12} Activity — 2 mcg.

Send for free samples and literature.

CHARLES C. HASKELL & CO., INC., Richmond, Virginia



• *six years of experience with Pentids in millions of patients confirm clinical effectiveness and safety*

• *excellent results with 1 or 2 tablets t.i.d. for many common bacterial infections*

• *may be given without regard to meals*

• *economical . . . Pentids cost less than other penicillin salts*

Just 1 or 2 tablets t.i.d. Bottles of 12, 100 and 500

NEW! PENTIDS FOR SYRUP. Orange flavored powder which, when prepared with water, provides 60 cc. of syrup with a potency of 200,000 units of penicillin G potassium per 5 cc. teaspoonful.

Also available: Pentids Capsules, Pentids Soluble Tablets. Pentid-Sulfas.

SQUIBB *Squibb Quality—the Priceless Ingredient*

"PENTIDS"® IS A SQUIBB TRADEMARK

when a cold takes hold
counteract all the symptoms

To curb and control even the severest cold symptoms, CORICIDIN® FORTÉ Capsules offer the combined benefits of clinically proved CORICIDIN—plus—

methamphetamine—to counteract depression and fatigue
vitamin C—to meet added requirements during stress of illness
antihistamine—in full therapeutic dosage

CORICIDIN FORTÉ provides comprehensive therapy not only to counteract congestive and coryzal symptoms of the severest cold but also to combat lassitude, fever, aching muscles, torpor, depression and general malaise.

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Successful appetite control begins in the supermarket

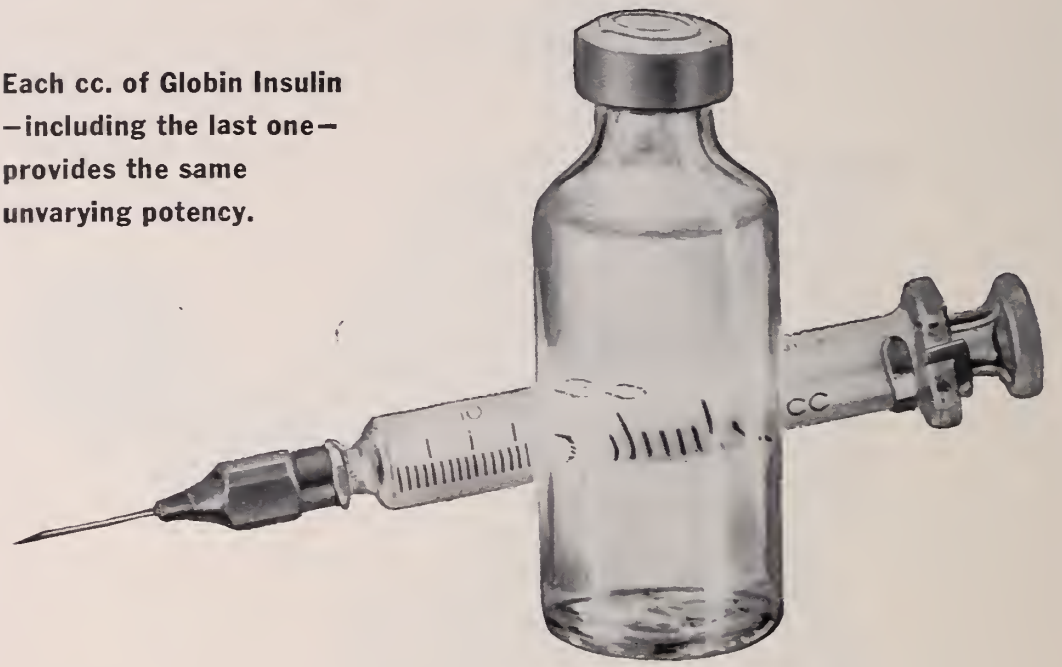
If your overweight patient can resist the temptation to buy high calorie snacks, he's well on the road to successful weight reduction. You will find that one Dexedrine* Spansule sustained release capsule taken in the morning controls appetite all day long—both at mealtimes and in the supermarket.

SKF

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F. †T.M. Reg. U.S. Pat. Off.

Avoid "BOTTOM OF THE VIAL" reactions

Each cc. of Globin Insulin
—including the last one—
provides the same
unvarying potency.



Of the intermediate-acting insulins, only Globin Insulin is a clear solution.

24-hour control for the majority of diabetics

GLOBIN INSULIN

'B. W. & CO.'®

BURROUGHS WELLCOME & CO. (U. S. A.) INC., Tuckahoe, New York

If Monilial overgrowth is a factor

ACHROSTATIN* V

Tetracycline (phosphate-buffered) and Nystatin

Combines ACHROMYCIN V with NYSTATIN

ACHROSTATIN V combines ACHROMYCIN† V . . . the new rapid-acting oral form of ACHROMYCIN† Tetracycline . . . noted for its outstanding effectiveness against more than 50 different infections . . . and NYSTATIN . . . the antifungal specific. ACHROSTATIN V provides particularly effective therapy for those patients who are prone to monilial overgrowth during a protracted course of antibiotic treatment.

supplied:
ACHROSTATIN V CAPSULES contain 250 mg. tetracycline HCl equivalent (phosphate-buffered) and 250,000 units Nystatin.

dosage:
Basic oral dosage (6-7 mg. per lb. body weight per day) in the average adult is 4 capsules of ACHROSTATIN V per day, equivalent to 1 Gm. of ACHROMYCIN V.

*Trademark
†Reg. U. S. Pat. Off.

Lederle LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, N. Y.

"the value of analgesic and tranquilizing agents should be clearly recognized in the management of [angina]..."[1]

new for angina

PETN + ATARAX®

PENTAERYTHRITOL TETRANITRATE — BRAND OF HYDROXYZINE

CARTRAX*

links freedom from anginal attacks with a shelter of tranquility

In pain. Anxious. Fearful. On the road to cardiac invalidism. These are the pathways of angina patients. For fear and pain are inextricably linked in the angina syndrome.

For angina patients—perhaps the next one who enters your office—won't you consider new CARTRAX? This doubly effective therapy combines PETN (pentaerythritol tetranitrate) for lasting vasodilation and ATARAX for peace of mind. Thus CARTRAX relieves not only the anginal pain but reduces the concomitant anxiety.

Dosage and supplied: begin with 1 to 2 yellow tablets (10 mg. PETN plus 10 mg. ATARAX) 3 to 4 times daily. This may be increased for maximal effect by switching to *pink* tablets (20 mg. PETN plus 10 mg. ATARAX). In bottles of 100.

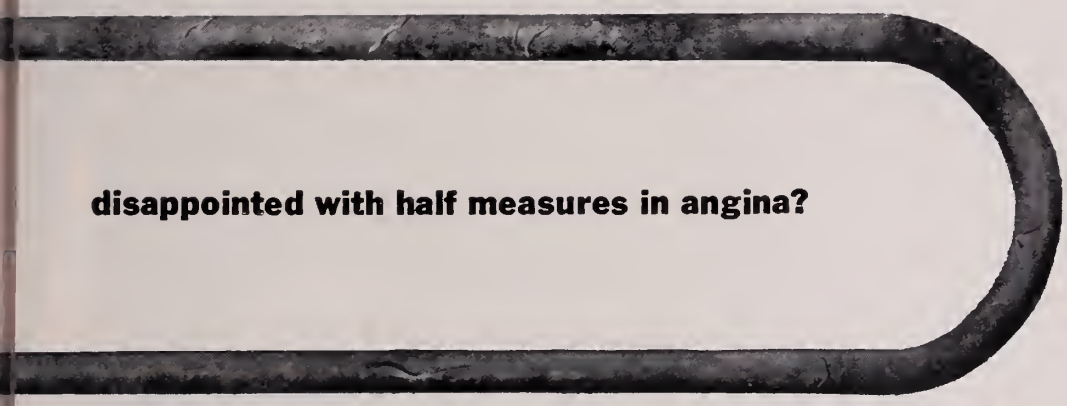
CARTRAX should be taken *before* meals, on a *continuous* dosage schedule. Use with caution in glaucoma.

1. Russek, H. I.: J. Am. Geriat. Soc. *4*:877 (Sept.) 1956.

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among nonhormonal antiarthritics...
unexcelled in
therapeutic potency

BUTAZOLIDIN®

(phenylbutazone GEIGY)

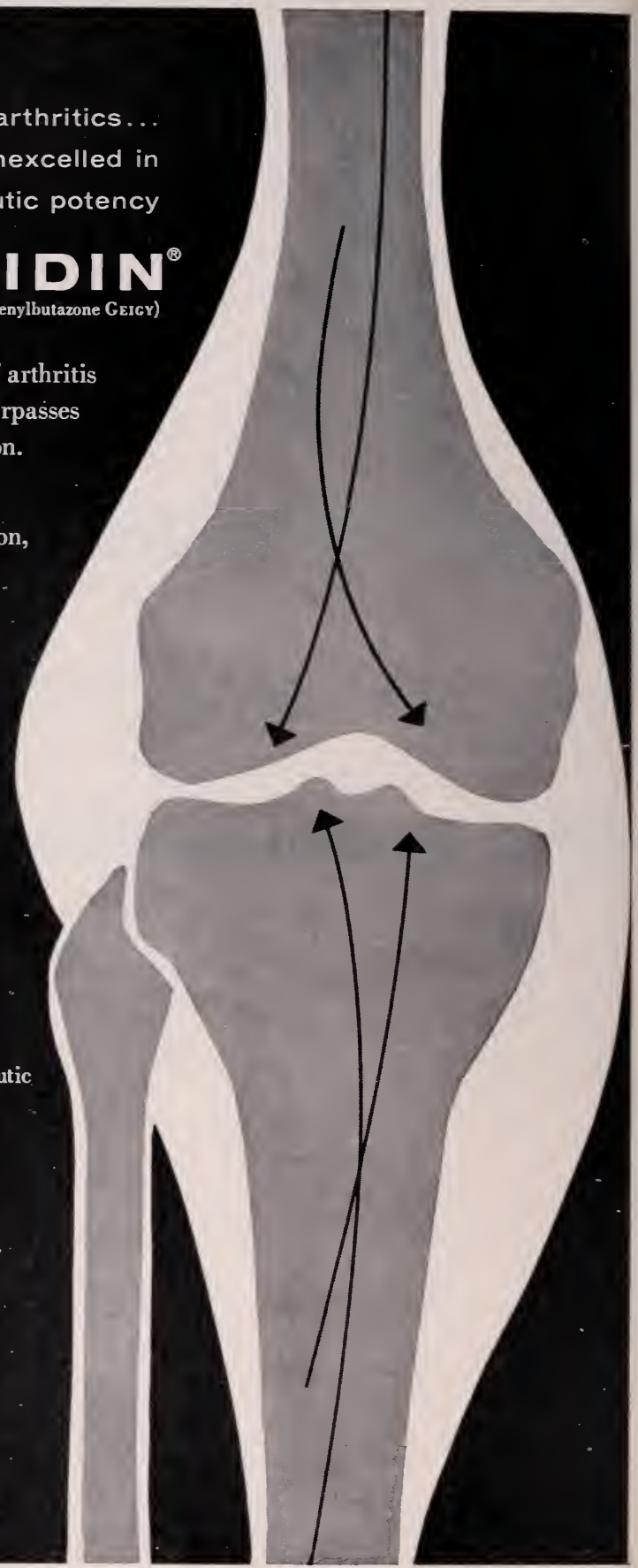
In the nonhormonal treatment of arthritis and allied disorders no agent surpasses BUTAZOLIDIN in potency of action.

Its well-established advantages include remarkably prompt action, broad scope of usefulness, and no tendency to development of drug tolerance. Being nonhormonal, BUTAZOLIDIN causes no upset of normal endocrine balance.

BUTAZOLIDIN relieves pain, improves function, resolves inflammation in:
Gouty Arthritis
Rheumatoid Arthritis
Rheumatoid Spondylitis
Painful Shoulder Syndrome

BUTAZOLIDIN being a potent therapeutic agent, physicians unfamiliar with its use are urged to send for detailed literature before instituting therapy.

BUTAZOLIDIN® (phenylbutazone GEIGY). Red coated tablets of 100 mg.



GEIGY

Ardsley, New York

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NEW

HYDELTRA® -T.B.A.

(Prednisolone *tertiary*-butylacetate, Merck)

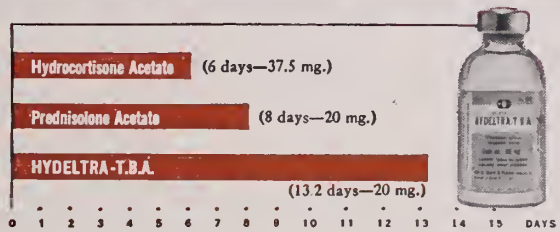
for relief that lasts—longer

in *SPRAINS*—
reduces tenderness,
swelling and
limitation of motion



- Osteoarthritis
- Acute gouty arthritis
- Bursitis
- Tendinitis
- Trigger finger
- Peritendinitis
- Trigger points
- Tennis elbow
- Lumbosacral strain
- Capsulitis
- Rheumatoid arthritis
- Frozen shoulder
- Coccydynia
- Rheumatoid nodules
- Fibrositis
- Tensor fascia lata syndrome
- Collateral ligament strains
- Sprains
- Radiculitis
- Osteochondritis
- Ganglia

Anti-inflammatory effect lasts longer than that provided by any other steroid ester



Dosage: the usual intra-articular, intra-bursal or soft tissue dose ranges from 20 to 30 mg. depending on location and extent of pathology.

Supplied: Suspension 'HYDELTRA'-T.B.A.—20 mg./cc. of prednisolone *tertiary*-butylacetate, in 5-cc. vials.

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DIVISION OF MERCK & CO., INC.
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your patients with generalized gastrointestinal complaints need the comprehensive benefits of

Tridal®

(DACTIL® + PIPTAL®—in one tablet)

rapid, prolonged relief throughout the G.I. tract
with unusual freedom from antispasmodic
and anticholinergic side effects

One tablet two or three times a day and one at bedtime. Each TRIDAL tablet contains 50 mg. of Dactil, the *only* brand of N-ethyl-3-piperidyl diphenylacetate hydrochloride, and 5 mg of Piptal, the *only* brand of N-ethyl-3-piperidyl-benzilate methobromide.

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full dosage

a new analgesic for safe, effective pain relief

CONTRAMAL . . . . a combination of full dosage levels of Acetyl-p-aminophenol and salicylamide with caffeine . . . to produce a high degree of analgesia safely, without adverse side effects and without the stomach distress often associated with aspirin administration.

For use in stubborn, chronic or intractable pain the potent CONTRAMAL formula is further reinforced with codeine phosphate in two strengths: CONTRAMAL No. 2—with 15 mg. codeine, and CONTRAMAL No. 3—with 30 mg. codeine. Supplied: CONTRAMAL—bottles of 100 and 1000 opaque pink and gray capsules; CONTRAMAL No. 2—bottles of 24, 100 and 500 opaque yellow capsules. CONTRAMAL No. 3—bottles of 24, 100 and 500 opaque scarlet capsules.

Clinical Samples and literature on request

PHYSICIANS PRODUCTS CO., INC. PETERSBURG, VA.


Mom "wears
the pants"
once too
often

frozen shoulder

Bursitis and tenosynovitis are new terms to homemakers, but they are not uncommon sequels to overexertion. Early antirheumatic therapy is to be encouraged in the treatment of these conditions, as it is in more serious rheumatic conditions, to alleviate pain and prevent progression of the disorder. With adequate therapy the prognosis of bursitis in its acute stage is good. Delaying therapy may result in extension of the inflammation and gross anatomical changes that tend to incapacitate the patient.

SIGMAGEN provides doubly protective corticoid-salicylate therapy—a combination of METICORTEN® (prednisone) and acetylsalicylic acid providing additive antirheumatic benefits as well as rapid analgesic effect. These benefits are supported by aluminum hydroxide to counteract excess gastric acidity and by ascorbic acid, the vitamin closely linked to adrenocortical function, to help meet the increased need for this vitamin during stress situations.

protective corticoid-salicylate therapy

SIGMAGEN* corticoid-analgesic compound Tablets

for patients who go beyond their physical capacity

Schering

*T. M. 60-J-217



when infection
strikes the respiratory tract . . .

ILOTYCIN

(Erythromycin, Lilly)

provides singularly effective antibiotic therapy because

- Virtually all gram-positive organisms are sensitive
- Allergic reactions following systemic therapy are rare
- Bactericidal action kills susceptible organisms
- Normal intestinal flora is not appreciably disturbed

Dosage: The usual adult dose is 250 mg. every six hours.

Available in specially coated tablets, pediatric suspensions, drops, otic solution, ointments, and I.V. ampoules.

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The Virginia
MEDICAL
MONTHLY

November, 1957

Vol. 84, No. 11
Whole No. 1265

Guest Editorial . . . .

Why Write

TODAY, our world has become a dynamic and changing one requiring that we keep abreast of scientific findings. The recording and publishing of ideas, concepts and findings is of the utmost importance. In any scientific writing there are certain basic principles to be recognized and observed. Manuscripts should be concise, clear, simple, dealing with a specific phase of medicine, presenting new facts or a summation and review of old ones. Manuscripts may be short yet complete. Particularly is this true if diagrams, figures, tables or graphs are inserted to support the text and substantiate its findings. Writing not only helps to disseminate knowledge but it also helps to develop the physician and to allow the physician to be better known outside of his own community. Writing helps to make the author better informed on the subject which is being presented and probably is one of the most important reasons why research should be published.

When one begins to write, one must first have clearly in mind the objective and have a plan for the development of the subject. In selecting a title, it is well to bear in mind that it must be short, yet clearly designate the subject matter within the manuscript. When in the process of preparing a paper, one should try to consider the many approaches to the subject, walk around it, so to speak, see it from many angles and note its many facets. In this way, one may become aware both of the good and the weak aspects. Human behavior often travels in fixed patterns. What one sees depends all too often on one's past experience or on one's preconceived ideas.

Anyone developing new procedures or having new concepts should be willing to discuss and share them with others. No one should underestimate the power of an idea or the effectiveness of the pen. A discussion may be concerned with either clinical or experimental subjects. For example, before a disease can be discussed, the normal findings should be given or shown, thus laying the basis for an understanding of the altered physiologic state. Anyone writing should recognize that research is the result of cooperation and team work. An ophthalmologist may need the assistance of the clinician, the histo-chemist, the physiologist, the pathologist and other specialists in medicine to aid him in his research. These work as a team, thus each may be better informed to the end that the patient may be better served. There are compensations from such united efforts as: (1) offering the opportunity for men in various specialties to better know each other and understand the language of their respective fields of interest; (2) through the publications of the results of the work, wider dissemina-

tion of the findings of research will be made possible. The writer must recognize that the subject may not only be of interest to those in his specialty but may stimulate the interest of those in related medical fields. His contribution is but a part of a larger sphere of scientific endeavor in which many may participate. This may be an ideal, but in actuality, often the most valuable findings have stemmed from the work of one individual who with a dynamic idea had a practical, workable plan of procedure in solving a problem.

Anyone who would write on a subject owes it to himself and his readers to first read the literature on the subject for it is there one learns of the efforts of others. Early in the paper one should present a review of the publications by recognized authorities on the subject. Care must be taken in the correctness of details such as in the bibliography, the references, the accuracy of tables and graphs and the correctness of legends. The final step in the preparation of one's manuscript is the evaluation of findings with those previously published. Then one's conclusions can be drawn and added to medical knowledge.

Even if one's thesis may eventually be proven to be unsound or impractical one will be given credit for original thought and presentation that has provoked discussion. Presentation of different opinions stirs investigations so that the truth may be found. This is all the more reason for one to publish records of his clinical findings and research.

L. Benjamin Sheppard, M.D.

Editor's Note: Dr. Sheppard is Assistant Professor of Ophthalmology at The Medical College of Virginia.

Barbituric Acid Derivatives

Urine

100 ml. of urine is placed into a large separatory funnel. Test urine with litmus paper to make certain it is slightly acid. If it is not, add 1 or 2 drops of 10% sulfuric acid, and again retest. Shake for several mintues with 200 ml. of ether. Allow the two layers to settle. Separate the layers, by discarding the urine residue. The ether (upper layer) is filtered through 2 layers of course grade filter paper to remove water. The ether filtrate is collected in a pyrex evaporating dish and evaporated to dryness on a water bath. (Keep away from open flame!).

If residue is tarry yellow-brown (usually), add 15 ml. of chloroform and swirl and stir to dissolve residue. Then add a small pinch (size of match head) of activated animal charcoal. Again swirl and stir. The charcoal will absorb much of the yellow organic impurities that might interfere with the test. Filter and collect the clear chloroform into a small container. Gently evaporate to about 1-2 ml. Several drops of this are transferred to a micro test tube, or a micro spot plate. Add 2 drops of cobalt acetate (1% in absolute methyl alcohol). Mix well by swirling and add 3 drops of isopropyl amine (5% in absolute methyl alcohol).

A blue-violet color indicates the presence of a barbiturate. Test may be used directly on powders or tablets.

(Diphenylhydantoin (Dilantin) and other ureides also give a positive test.)

Practical Cardiology

NATHAN BLOOM, M.D.
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IN RECENT YEARS the study of the heart and heart disease has widened in range to such an extent that specialists within the field are now restricting their studies to only a limited type of cardiac problem. For example, we have the pediatric cardiologist, who is primarily interested in congenital heart disease. There is the specialist in radioactive substances, who is chiefly interested in severe coronary cases and the thyrotoxic cardiac. Cardiac catheterization and angiocardiography also have specialists who spend all their time in this restricted field of endeavor. We even have the hypertensive specialist. All of these scientists are dedicated men adding to our knowledge of cardiovascular problems, but without the general practitioner they would be lost, because ultimately it is the general physician who furnishes the material for the continuation of their studies.

It is not our purpose here to discuss any specific specialty, but rather to simplify the approach to heart disease in general. When a patient presents himself to the Generalist as a cardiac problem, we should attempt to answer these questions: (1) does the patient have heart disease; (2) if so, what kind of heart disease; (3) is there diminution in cardiac reserve and how much reserve has been lost; and (4) what therapy is indicated? The problem may be simple, but often is extremely complicated. Even with all of our modern devices, such as x-ray, fluoroscopy, the electrocardiogram, the ballistocardiogram, exercise tests and cardiac catheterization, we are often at a loss in answering question number one, "does the patient have heart disease?" If, for example, the patient complains of breathlessness, is it on exercise or at rest? Is it associated with emotional reaction or occupation? Is it worse at night, complicated by cough, expectoration of blood, wheezing, or pain? A clever examiner could discuss this one symptom with the patient for a period of time without reaching a definite conclusion as to its relationship to the heart. We must admit that such a careful analysis of the patient's symptoms will often lead to a proper cardiac diagnosis with only minimal aid from the physical examination and the various laboratory studies, but the combination of a careful history and physical examination, with x-rays, electrocardiograms and fluoroscopy, should be sufficient to solve the problem.

We have stated that the scope of cardiology has broadened so that it would be impossible to cover the entire field. We will only discuss the diagnosis and treatment of coronary artery disease. The presenting symptom of the coronary patient is chest pain, although most patients complaining of chest pain do not have coronary heart disease. If the pain is associated with deep breathing, cough, after a heavy meal, or is on the surface of the chest, it is probably not due to coronary artery disease. The location of the pain may help in diagnosis.

It is most unusual for heart pain to be located at the periphery of the chest. The logical area of pain is substernal. The pain may radiate in all directions: to the back, up the neck to the jaw, to the shoulders, arms and down to the finger tips. Anginal pain, contrary to popular belief, lasts for more than a moment. The duration is for several minutes, more likely five to ten minutes. It is brought on by exertion and relieved by rest. The symptom complex of substernal pain on exertion, relieved by rest, is usually diagnostic. Unfortunately, the electrocardiogram, blood pressure and x-ray studies of the heart may all be within normal limits and yet the patient have severe angina pectoris. Electrocardiograms before and after exercise will at times help in diagnosis. An abnormal electrocardiogram before and after exercise will reveal depressed S-T segments and negative T waves, returning to normal after rest. If an adult patient has substernal pain on exertion, relieved by rest, one should be highly suspicious of coronary artery disease; and in spite of the danger of causing cardiophobia, the patient should be treated as a coronary heart disease suspect. He should be given nitroglycerin and his activities restricted.

We have found it helpful to divide our coronary cases into three groups. These are: angina pectoris, coronary insufficiency, and coronary thrombosis with myocardial infarction. This division aids in diagnosis and treatment. The patient with angina pec-

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Presented before the Richmond Academy of General Practice, October 16, 1956.

toris has a symptom complex of chest pain on exertion, relieved by rest or by nitroglycerin. The pain lasts for a few minutes, there are seldom any electrocardiographic changes or any other evidence of heart damage, the temperature is normal, the blood studies are normal, and the patient fully recovers after sublingual nitroglycerin or a few moments of rest.

In coronary insufficiency the chest pain may not be related to exertion. It is often prolonged for hours, not relieved by nitroglycerin, the blood pressure is maintained and the blood count is normal, but the electrocardiogram shows transient S-T segment depression and T wave negativity. After several hours the pain lessens or disappears, and in a few hours or days the electrocardiogram returns to normal. The patient may return to activity within a week or two.

Those individuals with coronary thrombosis and myocardial infarction present an entirely different picture. The chest pain is much more severe and prostrating, there often is an associated rise in temperature and leukocytosis; the electrocardiogram is usually diagnostic of acute myocardial infarction, with development of Q waves and elevated, convex S-T segments, followed by inversion of T waves.

Eventually most individuals with the anginal syndrome or coronary insufficiency develop coronary thrombosis and myocardial infarction. Often, after the patient has infarcted, it is found that anginal pain is lessened. This seems paradoxical, but is explained by blockage of irritable reflexes at the site of the infarction.

If there was ever the necessity for close doctor-patient relationship it is with the individual suffering with coronary artery disease. He is afraid of dying and he must be reassured and relieved, not only of his pain but of his anxiety. In most instances of angina pectoris or coronary insufficiency the patient is greatly helped by a calm appraisal of his condition. There are certain essential rules. If he is obese, reduction of weight is essential. Exercise should be limited and smoking restricted. If he is accustomed to gambling at high stakes or indulges in athletic activities, these should be restricted until the patient's reserve improves. There are numerous coronary dilators but none are better than nitroglycerin, and when this drug is used one should start with the smallest dose possible; this is usually 1/400 grain. Very often larger doses cause tachycardia and excruciating headaches and the patient will refuse to take the drug because of the side effects. We have seen individuals who are relieved by only a pinch of nitroglycerin, which is about 1/800 grain. There are several so-called long range coronary vasodilators and, although some observers are very enthusiastic about them, we have not been greatly impressed by their use. Occasionally a patient will respond to Peritrate in 10 to 20 mgm. doses, four times daily; and a rare individual will improve by taking xanthines. Mild sedatives are also of some value. One must teach the patient how to live within his coronary reserve, and if he is completely cooperative it is possible to prevent a major catastrophe, such as a myocardial infarction.

The onset of coronary thrombosis, followed by myocardial infarction is a harrowing experience for the patient. The chest pain may be excruciating and unbearable and is usually followed by varying degrees of shock. When first seen, the patient should be given morphine in doses of 15 to 30 mgms. If not helped immediately, this dose should be repeated, even intravenously. Very often, several large doses of morphine will cause nausea and vomiting, but this cannot be helped because, if the patient continues with pain, the resulting shock may cause death. If shock develops parenteral fluids should be started. We prefer 500 cc. of 5% glucose in distilled water, adding 8 mgms. levophed to the flask. Some observers prefer a unit of plasma or 250 cc. of whole blood. The fluid must be continued until the blood pressure is maintained and other symptoms of shock disappear. There is some danger to continuous levophed administration because of the marked peripheral vasoconstriction caused by this drug, but again this is a calculated risk, as shock may cause death. Oxygen is indicated, preferably by nasal tube, at six to eight liters per minute. The tube should be cleansed every four to six hours, because it is easily plugged by mucus. If the patient is uncomfortable with the tube or mask, an oxygen tent may be used, but because of much loss of oxygen in a tent, we suggest that it be administered at fifteen liters per minute. A Foley catheter may be necessary because of difficulty in voiding. It is also desirable for complete bed rest.

In recent years there has been a tendency to allow the patient more freedom of movement immediately following a myocardial infarction. The armchair-bed treatment suggested by Dr. Samuel Levine is accepted in many areas. We prefer to keep our patients at bed rest for several days, because minimal exertion may cause an abnormal

cardiac rhythm or cardiac rupture within the first week following a myocardial infarction. The only absolute indication for allowing the patient to be up earlier than one week is his inability to use a urinal or a bedpan. After the first week we allow the patient to dangle his feet and to sit in a chair beside the bed, but he is not allowed to walk for at least three weeks. We prefer small enemas rather than laxatives. In the first few days the diet is not important. The patient is actually too ill to desire any food, but small amounts of liquids are satisfactory. Afterwards he is placed on a bland diet.

We use anticoagulants on all acute myocardial infarctions and routinely start by the injection of 50 mgms. of Heparin, intravenously. This dose is repeated after four hours. Meanwhile, the prothrombin time is taken and daily thereafter. Dicoumarol is given in the following doses: if the initial prothrombin time is over 75%, 300 mgms.; 150 mgms. if the prothrombin time is over 50%; and 100 mgms. if the prothrombin time is 25 to 50%; if the prothrombin time is less than 25%, it is best to order specific doses of Dicoumarol. We consider this level low enough, although some observers suggest a range of 10 to 20%. It has been our experience that most complications of hemorrhage after Dicoumarol occur in those individuals kept at 10 to 20% level.

Complete nursing care is essential for the entire hospital stay if possible. Mild sedation is indicated and Demerol in 50 to 100 mgm. dosages is given for analgesia. Anticoagulants are usually continued for the entire stay in the hospital. The diet should be bland and we prefer low, small enemas to strong laxatives. The only indication for digitalis is the development of heart failure, or possibly auricular fibrillation. Quinidine is not given for an occasional extrasystole, but only if the heart becomes extremely irritable. Pronestyl and quinidine may both be necessary if ventricular tachycardia develops. Heart block may be a dangerous complication because if the heart rate slows to 20 or 30 per minute, Adam-Stokes seizures may occur. They may be controlled by the use of adrenaline, ephedrine, isuprel or molar lactate solution.

In acute cases of myocardial infarction, if you have treated shock, given morphine, oxygen and anticoagulants, and the patient has not developed heart failure, rehabilitation should be started. Sometimes it is important to rehabilitate the family because they usually give you more trouble than the patient. One must prevent any emotional excitement by restricting visitors and eliminating any business conflicts.

Let us consider the problem of our coronary patient after he leaves the hospital, which is usually from three to six weeks following the attack. He is now able to use the bathroom, and to take his own bath. He may be up for meals and is allowed to walk about the house with extreme care on the steps. If angina occurs, nitroglycerin is given, and at times the patient may require nitroglycerin prophylactically before certain exertions, such as dressing or shaving. The patient is continued on a mild sedative several times a day. The diet is restricted but primarily in the fat intake, as we have not been impressed with any results from low-cholesterol diets, and they are usually too monotonous for the average patient. Gradually, activity is increased and within eight weeks the patient should be taking short walks, he may return to work for several hours a day and drive the car short distances if there is not too much traffic. We favor the restriction of smoking for several months but allow an occasional drink. After three months the patient should resume most of his activities, unless he has a strenuous occupation requiring manual labor, then rehabilitation in a sedentary position should be attempted. Sex relations are allowed after three months. It might be wise to use nitroglycerin prophylactically.

In conclusion, we have discussed some of the problems confronting the general practitioner in handling cardiacs in general and the coronary case in particular. There are many perplexing questions still to be answered: the value of diet, the use of cholesterol substitutes such as sitosterol, the use of radioactive iodine in the treatment of severe coronary insufficiency, the long range treatment of coronary cases with anticoagulants, the role of estrogens in treatment, and the value of transaminase studies in early diagnosis. We hope that many of these questions will be answered in the near future but we leave you with this fundamental truth—if there is a good wholesome doctor-patient relationship, your cardiac will fair just as well as, if not better than any of those treated by the best cardiologist.

We appreciate the editorial assistance of Dr. Harold Nemuth.

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Diaphragmatic Esophageal Hiatus Hernia and Gastrointestinal Bleeding

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AMBROSE PARE in 1579 reported the first autopsy findings in a patient with diaphragmatic hernia. This was felt to be a quite rare condition for many years. The records of Guys Hospital in London from 1856 to 1920 revealed only two cases of diaphragmatic hernia diagnosed during life. Until 1912, there were only six hundred and fifty proven cases collected in the world literature, and of these only fifteen had been diagnosed during life[4]. Improved methods of diagnosis, mainly roentgenograms and esophagoscopy, as well as clinical suspicion have unveiled an increasing number of hiatus hernia. Between 1926 and 1941 Harrington[5] reviewed the files of the Mayo Clinic and reported six hundred cases of diaphragmatic hernia seen at that institution alone.

Ohnell[7] was the first to point out the correlation between hiatus hernia and bleeding, although it remained for Segal[10] in 1931 to associate anemia as being an important finding in hiatus hernia. He postulated that passive congestion, ulceration and/or esophagitis were the causes of blood loss and resultant anemia in these patients.

There has been a great variance of opinion in the literature as to the importance and the incidence of hiatus hernia. The majority of the studies which have been done are concerned with patients assumed to be having symptoms from their hiatus hernia. These studies have reported an incidence of hiatus hernias of approximately nine per cent[1]. In sharp contradistinction to the finding of these authors, an incidence of hiatus hernia of only one to one and one-half per cent has been revealed in patients without gastrointestinal complaints[2,11,3].

All the cases of diaphragmatic hiatus hernia admitted to the McGuire Veterans Administration Hospital during the past ten years, ending April 1956, were reviewed. Of these one hundred and six cases of hiatus hernia, there were fifty-two patients who did not have other demonstrable gastrointestinal disease.

From Medical Service, McGuire VA Hospital, Richmond, Va.

It is from this group of patients that the statistical data to be presented was obtained. The diagnosis in all of the cases was confirmed either by radiologic or esophagoscopic examinations, or by both. The ages when first admitted to the hospital varied from twenty-five to seventy-two years, with an average age of fifty-two (Table I). The age distribution

TABLE 1
AGE

Age	No. of Patients
20-29	1
30-39	10
40-49	6
50-59	24
60-69	9
70-79	2

Youngest—25 Oldest—72

in this series correlates with the large age groups of the veteran population. All the patients were males except one. Four patients were Negroes, the remainder white. In this group of patients only three of those with hiatus hernia were found to be without any gastrointestinal symptoms. The most common symptom found was epigastric pain, and it occurred in over half of the patients (Table II).

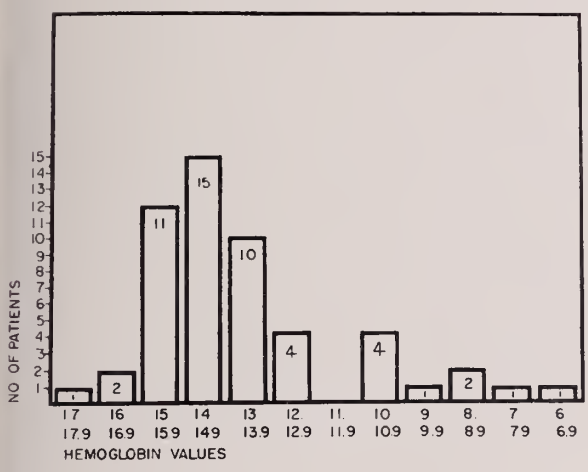
TABLE 2
FREQUENCY OF SYMPTOMS IN 52 PATIENTS

Symptoms	Percentage	No. of Patients
Epigastric pain	56%	29
Hematemesis	38%	20
Nausea and vomiting	38%	20
Substernal pain	31%	16
Abdominal fullness or bloating	28%	15
Melena	22%	12
Sour eructation	13%	7
Dysphagia	12%	6

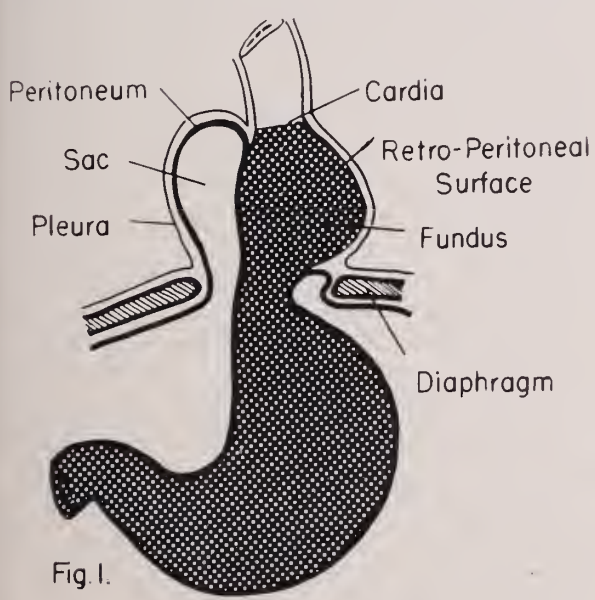
The pain was commonly encountered postprandially and was frequently aggravated in the recumbent position. Nausea and vomiting, substernal pain, sour eructation and dysphagia were noted in decreasing frequency. All of the symptoms tended to increase in severity in direct relation to their duration.

Twenty patients gave a history of hematemesis, and in two patients this occurred following a surgical procedure and led to the diagnosis of hiatus hernia. Ten patients gave a history of tarry stools. Nine of the patients had a significant anemia of eleven grams or less of hemoglobin. The lowest hemoglobins recorded in this group are presented (Table III). The anemias were either normocytic

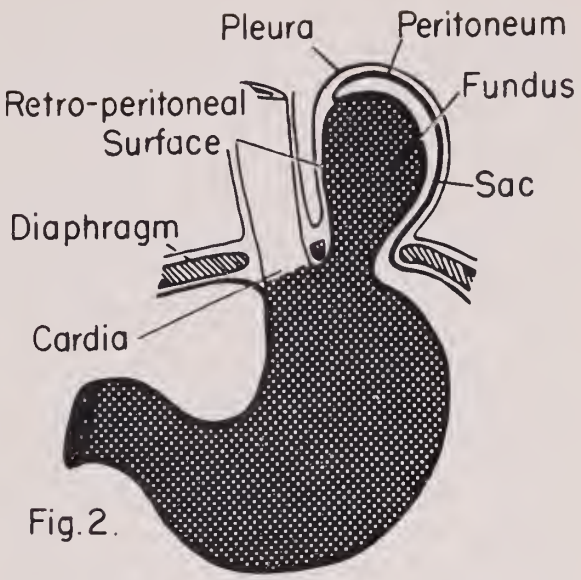
TABLE 3



and hypochromic or microcytic and hypochromic in type. Of these patients, two had paraesophageal hiatus hernias and seven had esophagogastric hiatal hernias. We have used the term esophagogastric to describe those hernias in which the stomach is pushed up through the hiatus, taking with it a pouch of the peritoneum. This is also the so-called sliding type hiatus hernia (Fig. 1). The other main

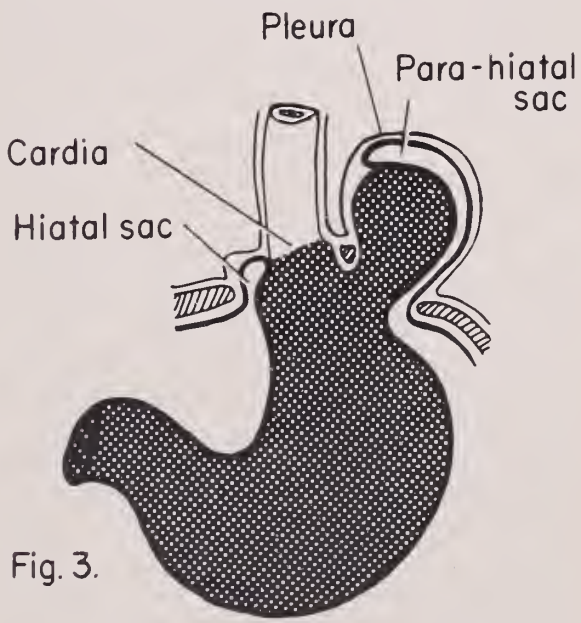


Hiatus hernia (sliding type)



Hiatus hernia (para-esophageal)

type is a paraesophageal hiatus hernia, which is distinguished from the sliding hiatus hernia by the fact that the cardia remains below the diaphragm. The esophagus retains its normal length and position (Fig. II). The third type is the congenitally short esophagus with thoracic stomach, and is characterized by an anatomically short esophagus, where the cardia lies within the mediastinum. A fourth type or composite type combines features of both sliding and paraesophageal hernias (Fig. III). The cases of sliding hiatus hernia or esophagogastric hernia and those with congenitally short esophagus are quite



Hiatus hernia (composite type)

difficult, if not impossible, to differentiate by roentgenographic examination. There were several instances in which a previously demonstrated hiatus hernia could not be redemonstrated on every repeated gastrointestinal roentgenogram.

A total of twenty-two patients had one or more stool examinations for occult blood performed and twelve patients had one or more positive stools reported. Five of the patients with positive stools had normal hemoglobins. We feel that occult bleeding in esophageal hiatus hernia is usually intermittent in nature and isolated stool examinations will often be negative, whereas serial stool examinations will usually give positive guaiac tests.

The anemias found in hiatus hernia are iron deficiency in type and are due to gastrointestinal bleeding from one of the following causes: 1. Peptic ulceration, due either to varicosities resulting from passive congestion or to disturbed circulation, 2. Inflammation in the region of the wall of the viscera incarcerated within the hiatus, and/or 3. Passive congestion. One possible further mechanism is esophagitis, usually reflux in type.

Murphy and Hays[6] in their series of patients reported from the Peter Bent Brigham Hospital found that seventy per cent of their patients with diaphragmatic hernia had anemia of less than twelve grams of hemoglobin, and that thirty-four per cent had an anemia of less than ten grams of hemoglobin. In this series were included seven patients with pernicious anemia, as well as nine patients with peptic ulcers, two patients with gastric ulcers and two patients with carcinoma of the stomach. When these patients were excluded from their series, an incidence of about thirty-five per cent were found to have anemia. Ritchey and Winsauer[8] reported a series of patients with hiatus hernias not associated with other gastrointestinal disease and found that twenty-six and eight-tenths per cent had iron deficiency anemias. Other authors have reported an incidence of anemia also occurring in twenty to thirty per cent of patients with hiatus hernia, but without other gastrointestinal disease[9].

Stevens[12] and others have shown that in adult life a constant amount of iron is present in the red cell mass, and additional stores are present in the tissues that are normally available for hemoglobin production. The adult is virtually independent of dietary iron once these iron stores are accrued, and iron deficiency anemia develops only after chronic blood loss. In the normal adult, the red cell mass contains approximately twenty-five hundred milligrams of iron. Fifteen hundred milligrams of iron is stored as the iron store in the form of ferritin and hemosiderin. Another five hundred milligrams of iron is present in the form of tissue enzymes and myoglobin with approximately three milligrams in the plasma representing transport iron, making up the remainder of the body iron. As chronic blood loss occurs, the tissue iron stores are depleted and there is no longer present available iron for the manufacture of new hemoglobin. Iron loss through menstruation and multiple pregnancies explains the much higher incidence of iron deficiency anemia in females, even beyond the menstrual age.

We feel that our somewhat lower incidence of anemias being found in eighteen per cent of these patients is explained on the basis that all but one of the patients being reported here was a male.

Hiatus hernia should be considered in the differential diagnosis of all iron deficiency anemias from obscure causes. The anemias developed by these patients are often marked and symptoms of anemia may be the presenting complaint.

CASE REPORT

L. E., a fifty-seven year old colored male patient was admitted to the Cardiovascular Section of the hospital complaining of shortness of breath, ankle edema and productive cough. Morning vomiting without hematemesis and epigastric pain, particularly after meals, had been noted for several years. There was no history of melena. Blood pressure was 160/90. The pulse was 112. There were fine rales in both lung bases. The cardiac rhythm was regular. A soft, blowing systolic murmur was heard at the apex. The pulmonary second sound was accentuated. The heart was enlarged to three centimeters outside the left midclavicular line. The liver edge was palpable two fingerbreadths below the right costal margin and was tender. There was a three plus pitting edema of both lower extremities. Arm-to-tongue circulation time with decholin was ten seconds. The hemoglobin was six and seven-tenths grams. The total erythrocyte count was two million eight hundred thousand per cubic millimeter, and the hematocrit was twenty-four millimeters in one hour by the Wintrobe method. The reticulocyte count was five per cent. Three out of five stool specimens were positive for occult blood by the guaiac method. The peripheral blood smear showed the red cells to be hypochromic with fairly marked anisocytosis and poikilocytosis. Normoblasts were present in the peripheral smear. The bone marrow revealed marked erythroid hyperplasia.

Roentgen studies of the large bowel and gallblad-

der were both reported as negative and roentgen studies of the upper gastrointestinal tract revealed a large esophageal hiatus hernia of the sliding type, with no other abnormalities noted.

Cardiac catheterization confirmed the clinical impression of a "high output" cardiac failure, secondary to anemia. The anemia was iron deficiency in type and was secondary to chronic blood loss from the hiatus hernia. The patient was given oral ferrous sulfate and his hemoglobin rose from six and seven-tenths grams on admission to eleven and four-tenths grams within two months. During this time, other treatment consisted of a bland diet, anticholinergic drugs, and remaining in an upright position for at least two hours after each meal. During this period the dyspnea and ankle edema, as well as other signs of cardiac failure, disappeared. After two months of observation on a medical regimen, the patient continued to complain of epigastric discomfort, nausea and early morning vomiting. The hernia was surgically repaired by the Allison technique and postoperative roentgenograms of the upper gastrointestinal tract revealed a successful repair of the hernia.

SUMMARY

Improved diagnostic techniques have unveiled an increasing number of hiatus hernia. One hundred and six cases of diaphragmatic hiatus hernia are reviewed and fifty-two of these cases did not have other demonstrable gastrointestinal disease. Nine, or eighteen per cent, of these patients had significant iron deficiency anemias. The mechanisms of chronic blood loss in esophageal hiatus hernia are discussed. The incidence of anemia found in these patients is somewhat lower than that reported by many other authors, whose series includes a greater preponderance of females. An unusual case history is reported.

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McGuire Veterans Administration Hospital
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Medical Museum for Wisconsin.

This story from Madison, Wis., was carried to newspapers nationally by the United Press:

"A 20-year dream of Wisconsin physicians to build the first museum devoted exclusively to the developments of medicine is nearing reality.

"The Wisconsin State Medical Society revealed architectural plons for the medical museum, which is to be located near Prairie du Chien.

"Dr. William D. Stovall, chairman of the society's historical section, said the museum will be built on the site of the old Fort Crawford Military hospital where Dr. William Beaumont conducted pioneer research on the physiology of digestion 125 years ago."

Selective Myomectomy

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IT IS UNFORTUNATE that surgeons are sometimes faced with the need to operate for fibroid tumors of the uterus in relatively young women. Deprivation of the function of procreation is, on occasion, unacceptable to some individuals. Reassurance that the surgeon will do every thing within his power to save the offending organ will help tide most women over this trying experience. There are times, naturally, when there is nothing to do but a hysterectomy. It is perhaps unfortunate that hysterectomy is a more simple procedure than myomectomy. However, it is possible within reasonable limits to allow a woman to retain her uterus when she so desires. She must be cautioned that it is a comparatively formidable procedure and that recurrence of the tumors and future surgery is a hazard to be faced. Surgeons who are interested in the conservative procedure will find that with proper hemostatic technic and some painstaking work on their part, they and their patients will be amply rewarded.

The basic technic for myomectomy is not new. Bonney[1] devised a special instrument to facilitate the operation. Rubin[2] and Davids[3] have described a technic whereby a rubber tourniquet is placed through artificially made openings in the broad ligament to encircle the cervix and compress the uterine vessels. Bieren and McKelway[4] have demonstrated that it is not ordinarily necessary to make openings in the broad ligaments and both the ovarian and uterine vessels may be encompassed by the tourniquet.

The technic is simple. A number eighteen elastic rubber catheter is used as a tourniquet. Any adhesions about the uterus and adnexa are first freed. The assistant takes the uterus, with its myomas, and holds it, together with both adnexa in his cupped hands and elevates these structures as far as possible through the abdominal incision. The tubes and infundibulopelvic ligaments are sufficiently elastic to be held in a single tourniquet loop which is passed from behind the cervix forwards. The surgeon slips the tourniquet beneath the assistant's finger tips, brings the free ends forward, pulls them tight, crosses and clamps them above the bladder. When the tourniquet is tight enough the operation may proceed in a bloodless field. There is no need to loosen the tourniquet until the completion of the operation.

It is important to plan the incisions in the uterus so that as many myomas as possible can be removed through each one. The areas of the tubal insertions should be avoided. Myomas are readily shelled out through linear incisions in the uterus. Capsular peritoneum should be carefully preserved in order to peritonealize each incision. It is advisable to explore the endometrial cavity to be certain that no submucous tumors have been missed and in order to establish a drainage tract. The injection of two millilitres of a one per cent aqueous solution of methylene blue through the cervix just prior to the operation will facilitate recognition of the endometrium. The cavity may be opened in several places if necessary. The endometrium is closed with interrupted catgut sutures. The cavity left by removal of each myoma is obliterated with figure of eight chromic catgut sutures. The capsular peritoneum about each uterine incision is inverted with chromic sutures of the Connell type to peritonealize each such area. When all the incisions in the uterus have been closed the tourniquet may be removed. Usually a few areas of bright red bleeding will appear within three minutes. These can be secured with mattress sutures. If no bleeding appears after five minutes it can be concluded that hemostasis is complete. There will always be some ooze from the suture lines. This will stop of its own accord. If the surgeon has conserved all the capsular peritoneum when making incisions in the uterus it will usually suffice for peritonealization. If raw areas are still left the round ligaments may be reflected to cover them or a free omental graft may be used. Postoperative early ambulation is important and is probably responsible for the fact that in a personal series of forty cases not a single instance of phlebitis has occurred.

The first menstrual period after a myomectomy may be excessive. Succeeding ones will be less so and by the fourth month the menses will have returned to normal. Conception may be allowed after three menstrual periods have elapsed. When pregnancy occurs the patient is reassured that there need be no complication of pregnancy or of labor because of the operation. One patient was subjected to two multiple myomectomies within a period of five years.

After the second operation she had two pregnancies with easy labor of less than six and three hours, respectively. However, uterine rupture can and does occur through myomectomy scars although none has happened in this particular series.

In this series of forty cases over a period of ten years, eight patients have conceived a total of eleven children born subsequent to the myomectomy. All eleven pregnancies have terminated by normal labor. Two additional patients have developed small, recurrent myomas. Another has developed large, recurrent myomas six years after myomectomy and is scheduled for a hysterectomy. Only one of those who conceived has developed another tumor. Shortly after birth of her only child a well encapsulated cystadenoma of the ovary was removed. Pathologic study resulted in the diagnosis of a cystadenocarcinoma and it was deemed advisable to remove the uterus, tubes and remaining ovary. Only once, in the forty operations, was it necessary to perform a hysterectomy after removal of the tourniquet because of uncontrollable bleeding.

CASE REPORTS

Case #1. A 32 year old unmarried white woman was seen with a myomatous mass extending six centimeters above the symphysis. She expressed an intense desire to retain her uterus. At laparotomy five myomas were found in the uterus. The largest measured seven centimeters in diameter. After a tourniquet was placed and secured, these were excised. The uterine cavity was opened once. After the tourniquet was removed two bright, red, spurting vessels were secured by mattress sutures. It was estimated that 400 millilitres of blood were lost during the procedure and she was given a pint of blood. Six months after the operation she was wearing a wedding ring "thanks to you, doctor." She hoped for offspring. A Rubin's test established the fact that her tubes were patent and her husband's sperm count was a high normal. She should be successful.

Case #2. A thirty year old white married female has been trying to conceive for several years without success. She was examined and was found to have a myomatous mass which extended four centimeters above the symphysis. A sperm test in her husband revealed a normal count. At laparotomy nine myomas were found to occupy the uterus, the largest measured nine centimeters in diameter. After a tourniquet was placed and secured the tumors were excised. The uterine cavity was opened twice. After the tourniquet was removed no bleeding occurred. It was estimated that 80 milliliters of blood were lost during the operation. Four months after the myomectomy the patient became pregnant and went to term without complication. Delivery was spontaneous after less than six hours of labor. Three years later a second child was born spontaneously after less than four hours of labor. Three years after the second child was born there was no recurrence of the myomas.

CONCLUSIONS

1. Use of a tourniquet for hemostasis has resulted in successful myomectomy in 39 out of 40 operations.
2. There have been no complications resulting from use of the uterine tourniquet in the 40 cases.
3. In married women subjected to the operation eleven pregnancies have occurred with normal childbirth as the final result.

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Dicumarol in Antepartum Thrombophlebitis

A Case Report

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ALTHOUGH antepartum venous thrombosis is by no means unheard of, there is a modicum of doubt regarding the use of anticoagulants, particularly Dicumarol, in its management. In an effort to add to the accumulating data, the following case is being reported. I have been unable to find in the literature any other reports of cesarean section following antepartal thromboembolic disease.

CASE REPORT

Mrs. A.L., a 40 year old wife of a traveling salesman, was first seen at her home in late June, 1956, because of nausea and vomiting. Her last normal menstural period had begun May 14, 1956. Although no pelvic examination was performed, pregnancy was assumed with the EDC being February 21, 1957. She had two children, ages 15 and 21 years. She also had a 7 month stillbirth (cause unknown) 17 years previously and an abortion at 2 months 3 years previously.

Physical findings at this initial visit were normal. She had some ptyalism with a remarkable aversion to swallowing her saliva and a pronounced reluctance to take advice. She was treated at home on several occasions with oral, intramuscular, and rectal medication including Thorazine, pyridoxine, Dramamine and other standard remedies. She was instructed, for morale purposes, to move about the house and even get out doors, but she remained bedfast, indulging in dietary indiscretions (such as greasy soups and cabbage) on whim.

She was hospitalized on June 30, given intravenous fluids, parenteral vitamins, Thorazine, "diet as tolerated", and symptomatic treatment. Pelvic examination disclosed a slightly enlarged boggy uterus, third degree retroverted, with some isthmal and cervical softening. She was discharged July 2, much improved.

She was readmitted July 9 for the same trouble, i.e., nausea, vomiting and ptyalism with excessive expectoration. Treatment as before, plus Banthine, was almost bootless. She still displayed extreme physical inertia and would quit her couch only on great coaxing.

Admission laboratory studies revealed a hemoglobin of 13.2 g.%; WBC 7,050 with 91% polys; total bilirubin 0.9 mg.%, direct 0.1 mg.%, indirect 0.8 mg.%; urine specific gravity 1.023, one plus albumin, negative sugar, numerous pus cells and bacteria. For the urinary findings, Furadantin was administered.

On July 13, pain in the left chest developed but examination was negative. Temperature up to this time had fluctuated between 98° and 100°F. with one spike to 101.4° on July 12. On July 16 pain developed in the left shoulder and midaxillary region along the 7th, 8th and 9th ribs. This was aggravated by motion, breathing, coughing, and vomiting. Auscultation was negative but tetracycline therapy was begun. The pain became worse during the night and medical consultation was obtained on July 17. The consultant reported some limitation of chest expansion on the left but no auscultatory changes. There were no physical findings in the legs. The impression was that there was diaphragmatic pleurisy and penicillin therapy was started. A chest x-ray the same day was interpreted as representing "some reaction in the left base in the costophrenic sulcus as well as elevation of the left hemidiaphragm and possibly a process going on within the lung itself. The remainder of the thorax is not remarkable. Impression: This x-ray appearance is compatible equally with a small pneumonitis and pleurisy or even a small embolus." On this same day, slight hemoptysis occurred.

Therefore, a venous thrombosis was suspected and Dicumarol therapy was started, the initial dose being 250 mg. She was now instructed to stay in bed.

On July 20 the prothrombin time was 43% of the control. The legs remained free of signs of thrombosis till the morning of July 21, when she awoke with the right leg generally mottled and flushed. There was pain in the anterior thigh on straight leg raising and she complained of a "funny feeling" on palpation along the saphenous vein. There was also tenderness over the inguinal ligament. An Ace bandage, toes to groin, was applied,

the leg elevated on pillows, and a sympathetic block with 1% procaine performed (with no adverse effects). The prothrombin time was 66% although she had by now received 550 mg. Dicumarol. On the suggestion of a surgical consultant, heparin in three 50 mg. doses was administered and papaverine was given.

On July 22 another sympathetic block was done. The prothrombin time was 25%. Tenderness was now present in the gastrocnemius region. Rather acute tenderness was present over the right inguinal and femoral canals and lower iliac vein.

The remainder of the hospital stay was uneventful. An attempt was made to keep the prothrombin time in the region of 30% but extremes of 12% on July 24 and 100% on July 29-30 were obtained. A fairly good level was obtained on 100 mg. Dicumarol a day. On July 24 a remedy for the nausea, ptyalism and expectoration was finally hit on: Bonamine Chewing Tablets.

Sedimenation rate on July 30 was 38 mm. per hour. The leg signs and symptoms gradually subsided. She was allowed up in wheel chair on August 6 and discharged August 11, about 11 weeks after conception.

The hospital course insofar as the conceptus was concerned went nicely: no vaginal bleeding or low abdominal or pelvic symptoms.

The remainder of the pregnancy was uneventful save for constant edema of the right leg, for which an elastic stocking was prescribed. On February 12, 1957, an elective cesarean section and a Pomeroy sterilization were performed, the indications having been: (1) anthropoid pelvis, (2) breech presentation, presenting part floating, (3) Rh negative with anti-D titer of 1:1 since December 18, 1956, (4) age 41, youngest child age 16, (5) maximum birth weight of previous largest child less than 7 pounds. A low section was done and a normal 7 pound, 8 ounce girl, unaffected by erythroblastosis, was delivered. A 2-3 cm. myoma in the uterine incision was removed. Blood specimen obtained at delivery showed the husband to be type "O", R_1R_1, the mother to be A Rh neg., and the baby A, R_1r. The mother's serum contained anti-D albumin agglutinins, 1:4, none of which could be demonstrated in the cord serum. The direct Coombs test on the cord blood was negative.

Postoperative care included fluids, wrapping both legs with Ace bandages, passive and active leg exercises, and early ambulation. She developed a thrombus in the left antecubital vein secondary to an infusion. She was discharged on the 6th postoperative day in good condition. She was seen in the office on the 11th postoperative day for breast engorgement and again on the 32nd day for a routine check. Recovery was excellent. Right leg edema was still present. The baby was doing fine.

COMMENTS

In this case two factors were probably responsible in causing the thrombus to develop: (1) the physical inertia, and (2) dehydration from anorexia, nausea and vomiting.

Assuming conception occurred about May 28, this patient developed unequivocal signs of thrombophlebitis at 8 weeks gestation, which is among the earliest onsets in pregnancy reported. She received a total of 2250 mg. Dicumarol over a period of 22 days. Thus she received no anticoagulants for 6 months prior to delivery.

Had there appeared evidence of another embolus, we would have been strongly inclined to ligate the vena cava. After caval ligation, swelling is usually limited to the extremity involved by the phlebitis and is only a little more severe than in the absence of ligation[1]. It was decided to rely on measures other than the use of anticoagulants postoperatively for fear of producing wound hemorrhage. In retrospect, it might have been wiser to use anticoagulants beginning on the second postoperative day.

DISCUSSION

There seems to be liberal interchanging of the terms "thrombophlebitis" and "phlebothrombosis" in the literature. Ullery[2] in discussing "antepartum thromboembolic disease" just says "thrombosis". Burns[3] prefers to use "thrombophlebitis" whereas Blum[4] speaks of "phlebothrombosis" and Faber and Kvale[5] consider the two as ". . . steps in a single pathological process, since . . . separation often is clinically difficult or impossible."

The course of events in the case presented here tends to support this last viewpoint, in that initially there was embolus formation from a silent thrombus (phlebothrombosis) and 8 days after the first sign of chest pain, a full-blown picture of thrombophlebitis developed.

Ullery believes that anticoagulants are safe for mother and child if the patient's prothrombin time is maintained at 20-30% of normal. (Thus, it will be seen, he uses Dicumarol.) Faber and Kvale also use Dicumarol. Burns prefers heparin unless prolonged therapy is anticipated. Gordon and Dean[6] do not believe in routine use of anticoagulants in

antepartum thrombosis unless emboli have been in evidence, while on the other side, Barry and Olson[7] state that "anticoagulant therapy is not contraindicated in the antepartum patient under adequate control." Ullery cities reports of 38 antepartum patients with thromboses who received anticoagulants. There were no deaths although 7 patients had emboli. Out of 97 patients not treated with anticoagulants, 18 had emboli and 15 died. In cases of antepartal thromboembolic disease, Ullery further advocates that the patient be handled by a team consisting of a cardiologist-internist and a vascular surgeon in addition to the obstetrician.

CONCLUSIONS

A maternal or fetal death is a horribly distressing event. Although there is some evidence that fetal death or retroplacental hemorrhage may occur as a result of Dicumarol therapy in pregnancy, a mass of evidence is accumulating indicating that this agent is quite safe when used intelligently[8]. The mortality figures from thromboembolic disease should impel everyone to consider the welfare of the mother first, realizing at the same time that the pregnancy may, but probably will not, suffer. In addition to the time-honored remedies, one has vena cava ligation or anticoagulants to choose from. Electing to use anticoagulants, one has at his disposal heparin, Dicumarol, and Tromexan. And the experience with Dicumarol "has been quite satisfactory[9]."

SUMMARY

1. A case of antepartum thrombophlebitis successfully treated with Dicumarol is presented.
2. The patient subsequently underwent a cesarean section. The postoperative period was successfully managed without further use of anticoagulants.
3. The handling of such a complication is briefly discussed.

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Dr. Elmer Hess Reports* . . .

"Without Blue Shield and Blue Cross and other insurance programs our hospitals and ourselves would be hard put to render the services that these two organizations have made possible. Since we have accepted the insurance principle, many patients who previously would be nonpaying patients have had their bills at least partially paid, and I am rather intolerant of the physician who is not a participating member of Blue Shield. I also am intolerant of the physician who in defense of his attitude is not being a participating member says with a loud voice, 'Nobody is going to tell me what to charge.' I am outspoken enough to say the physician who takes such an attitude is primarily interested not in service but in money. Today's professional freedom to be a private practitioner of medicine instead of a slave of government is due solely to Blue Shield—the physicians' answer to socialized medicine. Forgive me if I offend, but sometimes the truth hurts, and I am so jealous of the good name and the freedom of our profession."

*JAMA, Vol. 163, No. 2, p. 121.

Protean Manifestations of Primary Hyperparathyroidism

Case Reports

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PRIMARY HYPERPARATHYROIDISM is a relatively common disease, far more common than a review of hospital records would indicate, with recognition in many instances in proportion to the diligence of the search for this condition. Milne[1] has noted that often the diagnosis will not be made unless a systematic investigation is undertaken. Schneider and Robnett[2] have likewise emphasized the necessity for having basic concepts of parathyroid physiology which enable one to comprehend the varied clinical pattern of this disease. With this better understanding, our clinical index of suspicion is increased, and then laboratory confirmation is a relatively easy matter.

Numerous conditions may be associated with, or obscure, primary hyperparathyroidism. Osteoarthritis, particularly of the spine, is frequently associated with this disease as an incidental finding—with the symptoms due to hyperfunction of the parathyroid being attributed to the arthritis. Similarly, osteoporosis is often found, and may or may not be independent of the parathyroid disease. Certainly, these common conditions of osteoarthritis and osteoporosis deserve screening. It is also readily apparent that any type of bone pain or diffuse bone disease should be investigated along these lines.

Thyroid enlargements, particularly nodular or unilobar masses, should be regarded with suspicion. A parathyroid adenoma may be buried in the thyroid, and thyroid disease may or may not be present as well. On the other hand, the finding of a nodule in the thyroid in the presence of proved primary hyperparathyroidism does not indicate that this nodule is the parathyroid tumor; the surgeon must still be prepared to do a thorough neck exploration and, if necessary, to follow with mediastinal exploration at a later date. Nevertheless, all patients with thyroid masses should have a complete laboratory workup for parathyroid disease.

There is a very high incidence of peptic ulcer among patients with hyperparathyroidism. Black[3] has reported this to be as much as 24 per cent, with very poor response to therapy prior to removal of the tumor. Thus, patients with peptic ulcer should have a laboratory determination of parathyroid function, particularly if the ulcer is refractory to the usual therapy. It should be borne in mind, however, that the presence of peptic ulcer, in some cases, may create diagnostic difficulties. In the Burnett syndrome resulting from large intake of milk and soluble alkali, with advanced renal disease and hypercalcemia, it may be very difficult to distinguish primary from secondary hyperparathyroidism[3,4,5].

Among those conditions most suspected of being due to parathyroid disease, nephrolithiasis is the most common. Every patient with renal calculi, including those with a single calculus in the initial episode, should have the benefit of blood chemistry determinations plus a urine Sulkowitch determination. The serum calcium may be transiently normal, but the Sulkowitch test will always be elevated in the presence of hyperparathyroidism. An elevated Sulkowitch test despite a normal serum calcium is a positive indication for repeated serial serum calcium determinations[6].

In advanced renal diseases, interpretation of the laboratory findings may be difficult at times, with difficulty in distinguishing the primary type from secondary hyperparathyroidism. In renal insufficiency with phosphate retention, there is an elevated serum phosphorus and low serum calcium, the reverse of the findings in primary disease. If the renal insufficiency is prolonged and chronic, there may be a secondary rise of the serum calcium to normal levels due to hyperplasia of the parathyroid glands in response to the stimulus of the low calcium. The serum phosphorus remains high, nevertheless. To add to the confusion, however, renal impairment in primary parathyroid disease will, in turn, produce a high serum phosphorus secondarily.

Since it is the laboratory which confirms the diag-

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nosis, it might be well to review briefly the blood and urine changes. There is an elevated serum calcium in the presence of normal total protein, and a low or low-normal serum phosphorus. The low phosphorus is thought by some to have the greater significance diagnostically. Variations in the blood protein level will affect the serum calcium in the same direction, so that it is sometimes possible to have a "normal" calcium with low blood protein, which is actually a state of relative elevation of the calcium. It is of interest to note also that the cerebro-spinal fluid calcium does not mirror the rise in serum calcium. In this disease, the urine calcium excretion is likewise increased, and this increase is maintained despite administration of a neutral ash low-calcium diet containing less than 200 milligrams of calcium per day for one week. At the end of this time excretion of more than 150 milligrams of calcium per twenty-four hours is highly suggestive, while more than 200 milligrams is pathognomonic for hyperparathyroidism[6]. The alkaline phosphatase may or may not be elevated. Elevation usually indicates bone activity with demineralization and is most likely to be found in those with a low calcium intake in their diets. Milk drinkers, with high calcium intake, frequently do not present any evidence of bone activity.

A review of the records at the Medical College of Virginia Hospital reveals six cases of proved primary hyperparathyroidism, the earliest recorded case being recognized in 1950. Two of these cases are presented in detail, since they illustrate so well the points elucidated in the discussion above. The other four cases will be commented upon briefly.

Case No. 4. This 56-year old patient was first seen in May, 1954, complaining of indigestion, pins-and-needles sensations in her back associated with backache, and cold feet with burning, numbness and tingling. The past medical history included first degree heart block known for two years, recurrent cystitis and arthritis. Surgical history included hysterectomy, cholecystectomy, appendectomy and perineorrhaphy. Following the hysterectomy at 38 years, the patient had severe menopausal symptoms for ten years. The systemic review was non-contributory.

Physical examination revealed a markedly obese, short, elderly white female of Armenian extraction, in no distress. Fundi showed Grade I arteriosclerosis. There were atelectatic rales at the right lung base posteriorly. The peripheral vessels were sclerotic. The genitalia were atrophic. There was a second-degree cystocele with senile vaginitis and cervicitis. She had severe bilateral varicose veins. The legs were cool below the mid-tibia, with hyperesthesia below the mid-leg bilaterally. Oscillometric readings were normal, with palpable arterial pulsations. The remainder of the physical examination was essentially negative.

The electrocardiogram showed first-degree heart block with PR interval of 0.24 seconds. Upright fluoroscopy showed dilatation of the aorta, marked degenerative arthritis of the spine with osteoporosis, and on barium swallow a hiatus hernia measuring approximately 3 to 4 centimeters in diameter was demonstrated on deep inspiration.

The patient was placed on a low calorie diet, combined estrogen-androgen-vitamin therapy, and regimen for control of the symptoms of hiatus hernia. One month after the initial visit she still complained of severe pain in the hips, back and left side, and had symptoms referable to her cystocele with 32 cc. of residual urine. Examination showed tenderness and spasm of the paraspinal lumbar muscles extending from the sacral to the dorsal region. X-ray of the lumbo-sacral spine revealed incomplete sacralization of the first sacral segment, increase in the lordotic curvature and slight general hypertrophic change with one large spur on L-5. There was calcification in the wall of the abdominal aorta, and left renal calculus was suggested. The x-ray findings showed much less arthritic change than had been anticipated in view of the severity of the patient's symptoms. Retrograde pyelograms revealed two small calculi in the lower terminal calyces on the left side, and a few pus cells in the urine from the left kidney. The urologist remarked that these were probably the same calculi seen on films in 1944, with increase in size from two to six millimeters in diameter. He did not recommend surgical removal.

Throughout the next ten months the patient continued to complain of back and hip pain, indigestion, symptoms of bladder discomfort, constipation and numerous other less well-defined complaints. Barium enema revealed a spastic colon. Evaluation was difficult, as her complaints seemed to be out of proportion to the physical findings. However, in May, 1955, it seemed that she was describing deep bone pain. The possibility of hyperparathyroidism was considered, particularly in view of the renal calculi. Blood chemistry studies by a local laboratory showed elevated serum calcium, phosphorus and alkaline phosphatase with low normal total protein. The patient was then hospitalized

at the Medical College of Virginia Hospital for further study on June 3, 1955, approximately one year after first being seen.

Results of the hospital laboratory studies are shown in Figure 1. Quantitative urine calcium determinations were made after one week on the low calcium diet. The diagnosis of primary hyperparathyroidism was confirmed on the basis of these studies, despite lack of typical x-ray findings, including the dental lamina dura, pelvis and hips, skull, chest, upper gastro-intestinal tract, and barium enema.

On June 16, 1955, the patient developed acute left renal colic due to a shift in one calculus, which now blocked the uretero-pelvic junction. Surgical removal was accomplished on June 21.

On July 1, 1955, she underwent cervical exploratory operation for parathyroid tumor. A parathyroid adenoma about two centimeters in diameter was found in the outer posterior portion of the right lobe of the thyroid, which was removed with the tumor. Microscopic study showed it to be of the chief cell type with invasion of the capsule. (Plate 1.)

The patient had an uneventful post-operative course. She developed tetany which was easily controlled with Hytakerol, vitamin D and calcium. Her blood chemistries returned to normal (Figure 1). By November, 1955, she no longer had tetany and had discontinued all medication for control of tetany. Her bone pain had completely disappeared and she felt very well.

Comment: This case illustrates the value of listening to the patient's story carefully despite ill-defined symptoms with apparent neurotic tendencies and some language difficulty. The diagnosis was first suspected after a year of observation, as the patient described her symptoms. The case also illustrates the value of routine blood calcium determinations whenever renal calculi are noted. This patient had two renal stones for ten years, with only slight and gradual increase in size and no increase in number. Nevertheless, no blood calcium had been taken prior to the description of her pain as deep bone pain. In this case there were no pathognomic x-ray findings in the bones, despite the apparent

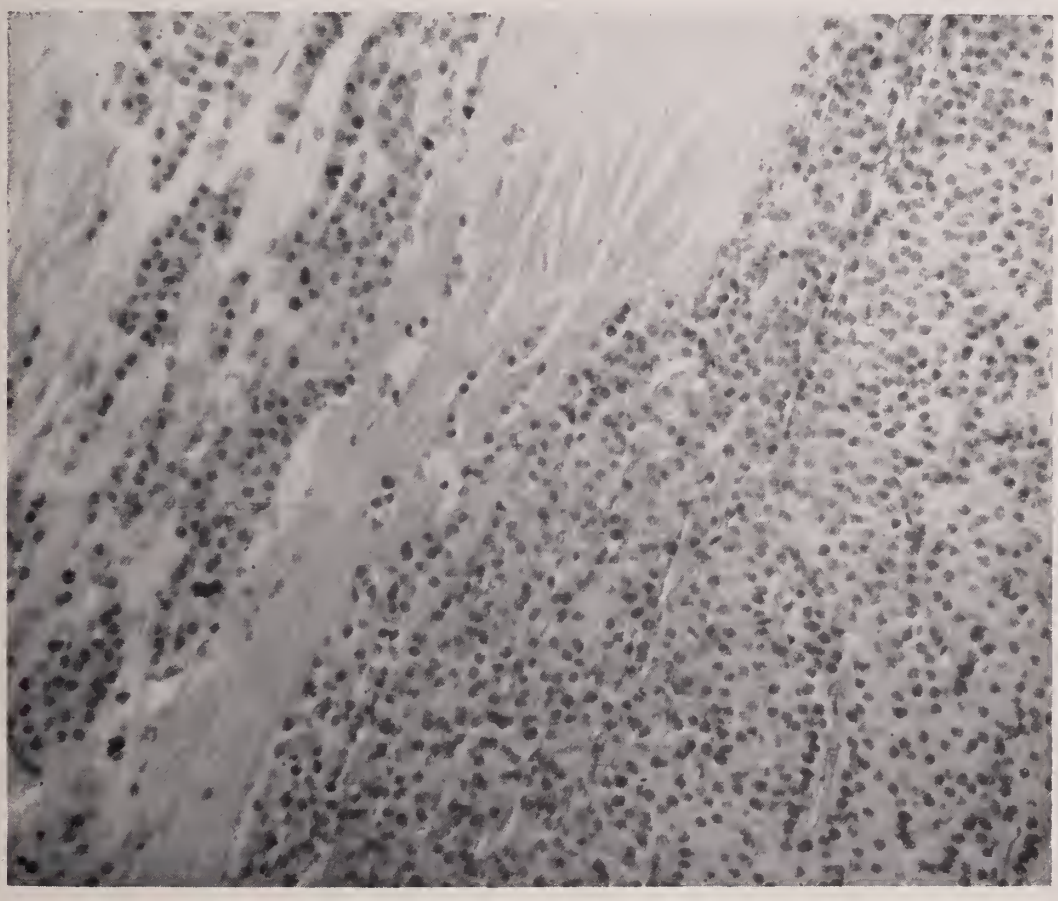


Plate 1.—Parathyroid adenoma removed in case 4. (x 100). This is chief cell type. Note the absence of fatty stroma, the pseudo-acinar gland formation, and the invasion of the capsule by sheets and strands of tumor cells.

Date	Urine		Serum				
	Calcium (24 hours) MGM	Sulkowitch	Calcium MGM %	Phosphorus MGM %	Alkaline Phosphatase (Bodansky)	Total Protein GM %	Blood Urea Nitrogen MGM%
6- 4-55	—	2+	13.2	2.6	2.0	7.0	10
6- 9-55	—	2+	13.8	2.5	2.9	—	—
6-11-55	—	—	14.1	2.3	2.6	—	—
6-13-55	360	—	—	—	—	—	—
		Low calcium diet					
6-20-55	270		14.2	3.4	2.0	—	—
6-24-55	—	—	—	—	—	6.9	12
7- 1-55	Cervical exploratory operation with removal of parathyroid						adenoma
7- 2-55	—	—	11.0	2.7	2.2	—	—
7- 3-55	—	—	10.6	—	2.0	—	—
7- 4-55	—	—	9.4	3.9	2.2	—	—
7- 5-55	—	—	9.0	3.5	2.0	—	—
7- 6-55	—	—	9.4	3.8	—	—	—
7- 7-55	—	—	8.0	2.7	—	—	—
7- 8-55	—	—	9.2	2.7	2.0	—	—
7-11-55	—	—	9.6	—	2.0	—	—
7-14-55	—	—	9.6	3.4	2.9	—	—
7-15-55	—	—	9.8	2.7	—	—	—

FIGURE 1.—Blood and urine chemistries in Case No. 4.

duration of her disease for at least ten years, as she was a milk drinker.

Case No. 5. This patient was a 66-year old white female first seen in October, 1955, with a chief complaint of generalized aching. One year before this she had been hospitalized and was found to have Parkinsonism. A diagnosis of arthritis, which she stated she had had for years, was also made. The patient stated that she had been treated with cortisone and ACTH two years ago for a long time with no benefit. For the past year she had noted increasing exhaustion and weakness, jitteriness and inability to perform many tasks. For the past two to three weeks she had noted urinary incontinence and urgency. She had had fever in the past two weeks, with weakness and fatigue, and a weight loss of ten pounds in the past six months. The patient also complained of continuous tension with pain in the back of the neck and shoulders radiating down the spine. There was intermittent swelling of the hands, limitation of motion of the shoulders extending down the spine, and evening edema. A mole on her forehead had grown larger in the past year.

Her past medical history included bursitis of the left upper extremity three years ago, neck traction in 1950-52 for neck pain, and peptic ulcer eight to ten years ago.

Physical examination revealed an elderly, somewhat feeble, stooped white female with typical Parkinsonian rigidity without tremor. The oral temperature was 99.4° F. The skin was dry with loss of turgor suggestive of recent weight loss, but was shiny over the hands. There was a raised papillomatous lesion of the left forehead, and a 2 x 2 cm. lipoma of the right forehead. There was moderate hearing impairment. The right lobe of the thyroid was palpable and contained a 1 x 2 cm. tender nodule. The blood pressure was 140/80, with pulse 76. Foul-smelling epithelial debris was removed from a deep navel. The genitalia and vagina revealed senile changes. The hands were slightly swollen diffusely, more marked on the right. There was tenderness to percussion of the entire spine, with dorsal kyphosis and limitation of motion of both shoulders with rigidity. Chest fluoroscopy revealed osteoporosis of the dorsal spine with kyphosis. The remainder of the physical examination was essentially negative.

The electrocardiogram was normal. The blood count showed leucocytosis of 12,000 with normal differential count. The urinalysis, blood sugar, blood urea nitrogen and erythrocyte sedimentation rate were normal. The basal metabolism was plus 2 1/2 per cent. The blood calcium was 12.4 milligrams per cent, and the urine Sulkowitch test was two plus.

She was placed on Parsidol with benefit to her Parkinsonism. She continued to complain of frequency and ran a low-grade fever, and was placed on tetracycline despite negative urinalysis. She lost

three pounds between her first visit and hospitalization two weeks later.

During the period of preliminary workup the patient continued to complain of marked frequency and marked weakness, which became more pronounced while she was on the low-calcium diet. Upper gastro-intestinal series revealed a small, sliding-type hiatus hernia. X-rays of the skull and dental lamina dura were negative. Chest x-ray showed slight enlargement of the thyroid shadow with slight deviation of the trachea to the left, and an arteriosclerotic aorta. Films of the dorsal spine showed demineralization with mild hypertrophic arthritis. The significant blood and urine chemistries are shown in Figure 2. The findings were considered diagnostic of primary hyperparathyroidism, and cervical exploration was performed on November 17, 1955. Both lobes of the thyroid were noted to be largely replaced by nodules. A parathyroid adenoma was located in the mid-third of the anterior aspect of the right thyroid gland. A total left lobectomy and partial right lobectomy with excision of the parathyroid adenoma were completed. The pathological report showed parathyroid adenoma weighing 0.5 grams, of the mixed chief and oxyphil type. The thyroid tissue was reported as nodular colloid goiter. The patient had a benign post-operative course with no tetany. Her urinary frequency ceased immediately after operation, and she gained strength rapidly. Blood chemistries returned to normal immediately after operation. She was discharged home on the ninth post-operative day.

Since discharge the patient's symptoms referable to her Parkinsonism progressively increased. A chemo-pallidectomy on the left was performed in November, 1956, with relief of the rigidity on the right.

Comment: This patient was first suspected of having primary hyperparathyroidism because of weakness, frequency, generalized aching and bone pain with minimal arthritis but definite osteoporosis, and the presence of a mass in the right lobe of the thyroid. There were no renal lesions or calculi, and no pathognomonic bone changes on x-ray. There was a history of peptic ulcer, although there was no evidence of activity at the time of the operation. The value of determining the blood calcium levels whenever a thyroid mass is found is well illustrated. It is also of interest that the serum phosphorus was always normal despite the hypercalcemia before operation.

Of the six cases in this series, two were Negro and four white, with five female and one male. The first two cases were diagnosed on the Urology Service because of multiple or recurrent renal calculi with complications. In the second case skeletal x-rays were negative. A mixed clear and oxyphil cell parathyroid adenoma was removed at operation. The first case refused operation despite clinical findings of renal calculi and markedly elevated serum calcium with normal serum phosphorus. Treatment was directed towards the urological complications, and further medical workup was not obtained.

The third case was admitted to the Medical Service because of a rapidly enlarging thyroid mass, first noted four months before admission, and history of known osteoporosis with fractures of the arm and back but with no bone symptoms for the previous year. She complained of hoarseness, and a pulsating mass was noted in the neck on swallowing. Chest

Date	Urine		Serum			
	Calcium (24 hours) MGM	Sulkowitch	Calcium MGM %	Phosphorus MGM %	Alkaline Phosphatase (Bodansky)	Total Protein GM %
11- 3-55	—	—	13.6	3.9	1.8	7.0
11- 4-55	450 low	2+	—	—	—	—
11- 9-55	— calcium	1+	11.2	3.5	2.5	—
11-11-55	250 diet	—	11.0	3.4	1.8	—
11-17-55	Cervical exploratory operation with removal of parathyroid adenoma					
11-18-55	—	—	10.2	—	—	—
11-21-55	—	—	8.8	—	—	—
11-22-55	—	—	9.6	—	—	—
1-16-56	—	2+	9.4	3.2	1.4	7.2

Figure 2.—Blood and urine chemistries in Case No. 5.

x-ray revealed mediastinal widening on the left with deviation and slight compression of the trachea. There was slight generalized osteoporosis and minimal osteoarthritis of the thoracic spine. The blood calcium was elevated. At operation a cystic mass was found in the left lobe of the thyroid gland measuring 7 x 5 x 4 cm. The mass was a transitional, water-clear adenoma of the parathyroid gland with cystic degeneration. The thyroid gland was normal. The resected left lobe with the adenoma weighed 50 grams.

The last patient in this series was operated upon for a thyroid mass. Hyperparathyroidism was not suspected preoperatively, and serum calcium determinations were not made. At operation it was found that the palpable mass was a parathyroid adenoma, and a second nodule was compressed thyroid tissue. A post-operative serum calcium determination was normal.

SUMMARY

1. Six cases of primary hyperparathyroidism at the Medical College of Virginia Hospital have been presented, two of them in detail.

2. These cases demonstrate the protean nature of the clinical picture of this disorder. In none of these cases were the classical bone cysts of von Recklinghausen demonstrated, and renal complications were present in only three. Three cases had palpable thyroid masses, and one included a history of peptic ulcer. Three cases showed marked osteoporosis, with osteoarthritis.

3. It is strongly urged that in conditions associated with primary hyperparathyroidism, namely, renal calculi, osteoporosis, osteoarthritis, thyroid mass and refractory peptic ulcer, studies of parathyroid function should be made a routine procedure.

Addendum: Since presenting this paper a fascinating event has occurred in our second case, with the appearance of a second parathyroid adenoma five years after the first was successfully resected, with return of blood chemistries to normal after the first operation. The second adenoma was located high in the left side of the neck, while the first was at the lower pole of the right thyroid lobe. The preoperative findings in the recurrence were typical for parathyroid adenoma. The serum phosphorus was low with elevated calcium, with no renal insufficiency, although the bone changes were more pronounced than at the time of removal of the first adenoma. The second adenoma was a chief-cell type. Serum calcium returned to normal after operation. This undoubtedly represents the independent appearance of two parathyroid adenomas chronologically unrelated to each other.

Acknowledgement is gratefully made to Dr. H. St. George Tucker, Jr., for his assistance in case four, to Dr. A. I. Dodson, Sr., Professor of Urology, and to Dr. Harry Walker, Professor of Medicine, for permission to use cases treated on their services, and to Dr. Martin Markowitz for permission to use case six. Dr. Frank Pole performed the renal surgery and Dr. Carrington Williams, Sr., performed the neck surgery in case four, and Dr. Arnold Salzberg resected the adenoma in case five.

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Benign Tumors of the Ovaries Associated With Fluid in the Chest

Case Report

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THIS IS the report of a case of a patient who had benign tumors of the ovaries, and pleural fluid that disappeared spontaneously after the tumors had been removed. Associated with the ovarian tumors were uterine fibroids. An important part of her clinical picture, in fact the situation that caused her to seek medical care, was an incarcerated umbilical hernia.

The importance of recognizing this syndrome, first called to attention and considered a clinical entity in 1937 by Meigs and Case[1], is that treatment of patients with these findings may be greatly simplified. Before the entity was described, some of these people's lives were despaired of because tumors in the female pelvis and chest fluid were always thought to be ovarian malignant disease and metastatic pleural implants. When one can elicit a long history of pelvic tumors and no evidence of wasting disease is present, one is justified in prompt pelvic exploration. If miscroscopic study of the removed tumors shows benign growth, especially fibromatous, one may safely postpone thoracentesis and wait for spontaneous disappearance of the chest fluid.

CASE REPORT

G. I. S. (Roanoke Memorial Hospital #8838, 1956) was a fifty-eight year old white maiden who worked part time in a grocery store. She was admitted to the hospital because of swelling of the abdomen. She had not previously consulted a doctor for over five years. Two days before admission she developed what she called intestinal flu and her family doctor, when he found the large abdominal masses, sent her into the hospital.

At the time of admission the patient stated that she had had the abdominal swelling for years, but recently she had noticed more swelling and distention toward the end of each day. She had not had any abdominal pain or discomfort and her bowel movements had been regular. Her urinary situation had been normal. Ten years previously she had gone through the menopause without difficulty.

Her past medical history was negative and she had had no surgery. Her weight had remained constant for the past several years. Her menstrual history up to and through the menopause had been normal.



Fig. 1—Large soft tissue masses from pelvis fill greater part of abdomen. Patchy calcification, typical of uterine myoma calcification, may be seen in the right lower quadrant. Dilated loops of small bowel may be seen at the right above the soft tissue mass.

The physical examination made upon admission to the hospital revealed no abnormal findings in the chest. The examination of the abdomen revealed a grapefruit size mass in the right lower quadrant, which was freely movable, and a larger, fixed, solid mass in the left upper quadrant. At the umbilicus

was an egg-sized mass with a dimple. This appeared to be a small hernia. None of the masses was tender.

At the time of admission to the hospital she had a leucocyte count of 11,400 with a normal differential count, and a hemoglobin of 14 grams. A voided urine specimen showed one plus albumin, two to four red blood cells and white blood cells, and a few casts. Her serological examinations were negative.

An admission 4 x 5 routine chest film showed an increased density in the right lower lung field area. On the 14 x 17 chest films this appeared to be a collection of fluid that filled the lower fourth of the right pleural cavity. (Fig. 2)



Fig. 2—May 10, 1956. Fluid occupies lower fourth of right pleural cavity.

The film of the abdomen (Fig. 1) showed large soft tissue masses that seemed to arise from the pelvis and fill most of the abdomen. The right lower quadrant mass was calcified in a pattern usually seen in calcified fibroid tumors of the uterus. Several loops of slightly dilated small intestine were noted in the right upper abdomen.

An abdominal operation was performed on May 11, 1956. A loop of small bowel, caught in an umbilical hernia, was dilated, but still viable, and was freed without difficulty. There were large ovarian masses on each side, the one on the left extending up almost to the rib cage. These masses were removed with the uterus.

The pathology report was: the specimen consists of both ovaries made up of large cystic tumors, and a uterus that contains several fibroid tumors. The larger ovarian tumor weighs 4500 grams, the smaller 550 grams. The uterus is attached to the larger ovarian tumor and weighs 550 grams. The larger fibroid tumor in the uterus is partly calcified. The microscopic studies show benign papillary cystadenoma of each ovary. The cysts are lined in most areas by columnar cells. Separating the cysts, and making up a large part of the ovarian tumors, is a dense fibrous stroma. The uterine tumors are typical leiomyomas.

The patient made an uneventful recovery and was discharged eight days after admission to the hospital and six days after the operation.

She returned for observation on June 27, 1956, and was found to be in good health, and without subjective complaint. A radiograph of the chest (Fig. 3) showed that the fluid previously noted in the right pleural cavity had disappeared spontaneously.



Fig. 3—June 27, 1956. The pleural cavities have cleared spontaneously.

(The patient's chest was radiographed again in May of 1957 and the pleural cavities were still clear.)

Meigs' first report recorded seven cases. In 1943, he, Armstrong and Hamilton[2] made another report,

adding additional cases, but pointing out that they had been able to find a report by an English surgeon, Lawson Tait, of a similar case he had seen as early as 1892. The syndrome, however, has certainly been popularized by Meigs and familiarity with his work is valuable in managing these cases properly.

SUMMARY

A case of benign tumors of the ovaries and concomitant pleural fluid has been presented. The pleural fluid cleared spontaneously after the ovarian tumors had been removed, and the pleural cavities have remained clear for a period of twelve months.

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A.M.A. to Meet December 3-6

The American Medical Association's 11th clinical meeting, set for Dec. 3-6 in Philadelphia, will be aimed at helping the general practitioner "catch up" on the latest medical advances.

Approximately 4,000 physicians are expected to attend the meeting, which is intended to provide the family doctor with information about the latest special techniques, treatments, medicines and equipment.

The A.M.A. council on scientific assembly and the general committee, headed by Dr. Gilson Colby Engel of Philadelphia, have nearly completed plans for the scientific meeting.

Center of activities will be Convention Hall where scientific and technical exhibits, color television, motion pictures, and scientific lectures will be presented. There will be 120 scientific exhibits prepared by physicians and 160 technical exhibits prepared by pharmaceutical houses, equipment manufacturers, and medical publishers.

Approximately 200 physicians will participate in lecture meetings, symposiums, and panel discussions on such subjects as cardiovascular disease, cancer, emotional problems of menopause, hypertension, diabetes, arthritis, and injuries.

A special feature of the meeting will be a trans-Atlantic conference between physicians in Philadelphia and London. The conference on advances in chemotherapy of cancer will be held via telephone at 3 p.m. (EST) Wednesday, Dec. 4.

Closed circuit television clinics, featuring Philadelphia physicians, will emanate from Lankenau Hospital. A medical motion picture program is also being prepared.

Headquarters will be the Bellevue-Stratford Hotel, where the A.M.A. House of Delegates, the association's policy-making body; the Board of Trustees, and various councils and committees will meet.

The first action of the House of Delegates when it convenes Tuesday, Dec. 3, will be to name the General Practitioner of the Year. This award is given annually to an outstanding American family doctor.

Carcinoma of the Prostate with Metastases to the Testis

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LEON W. POWELL, Jr., M.D.
RALPH R. LANDES, M.D.
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WHEN ONE CONSIDERS the early and widespread metastases that carcinoma of the prostate is prone to exhibit, it is surprising that the testes are not more frequently involved; yet to date, only 8 cases of carcinoma of the prostate with metastases to the testicle have been recorded. In none of these cases was the true nature of the testicular lesion recognized prior to pathologic examination.

The following case is the first one in which the diagnosis of carcinoma of the prostate with metastasis to the testis was made clinically, and it brings the total number of recorded cases to nine.

CASE REPORT

The patient, a 64 year old Negro male, was first seen in 1952 at another hospital because of difficulty in urination. At that time, an enlarged, nodular, hard prostate was found on rectal examination, and x-rays of the pelvis revealed bony metastases. A clinical diagnosis of carcinoma of the prostate was made. The patient was treated with stilbestrol, one milligram, 3 times daily and his urinary symptoms improved greatly. His residual urine volume was small and surgery was deemed unnecessary.

The patient was not heard from again until May, 1955, when he was seen because of a firm, nontender mass in the right testis. This mass appeared to be in the testicular parenchyma, but projected anteriorly as a smooth, spherical lesion approximately 1.5 cm. in diameter. The prostate gland was still rocky hard and nodular with lateral fixation. An x-ray of the pelvis revealed one 2 cm. area of bony condensation in the right ilium near the sacrum, but no definite osseous metastases. At that time, one of us (R.R.L.) thought this testicular nodule might represent a metastatic lesion from the primary prostatic carcinoma.

Consequently, the patient was admitted to Winslow Hospital for treatment. At that time (May 17,

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Fig. 1—Gross photograph of fixed testis sectioned through the tumor mass. The white nodule in the upper part of the figure is metastatic carcinoma.

1955) his hemoglobin was 11 grams with a red cell count of 3,600,000, a white cell count of 10,000 and a normal differential count. A urinalysis was essentially normal, and there were no other relevant findings. A bilateral orchidectomy was performed.

On gross pathologic examination, the right testis measured 5 x 3.5 x 3 cm. and the tunica albuginea was intact. On cut section, there was a firm, grayish-white tumor mass 1.5 x 1 x 1 cm. attached to the tunica albuginea and protruding into the testicular parenchyma. It did not involve the epididymis. The other testis was of similar size but contained no tumor mass grossly. The remaining testicular tissue was composed of salmon-colored seminiferous tubular material which was easily teased into long strings. On microscopic examination, both testes showed some interstitial fibrosis and moderate atrophy with oligospermia. The tumor mass in the right testis consisted of metastatic adenocarcinoma of a moderatly varied pattern. The tumor cells were cuboidal usually with pale cytoplasm and large oval nuclei of varying sizes. Other groups of cells had basophilic cytoplasm with dark nuclei. These cells were arranged in bizarre glandular patterns and formed cords and nests. Tumor cells were observed in the lumens of veins and lymphatics as well as in the interstitial fibrous tissue, but were not seen in the seminiferous tubules. The cellular pattern was compatible with a primary adenocarcinoma of the prostate gland. No tumor was seen in the left testis on microscopic examination.



Fig. 2—Photomicrograph of the carcinoma in the testis. The contrast between glandlike structures with pale cells (lower left) and those with dark staining cells (upper right) is seen here.

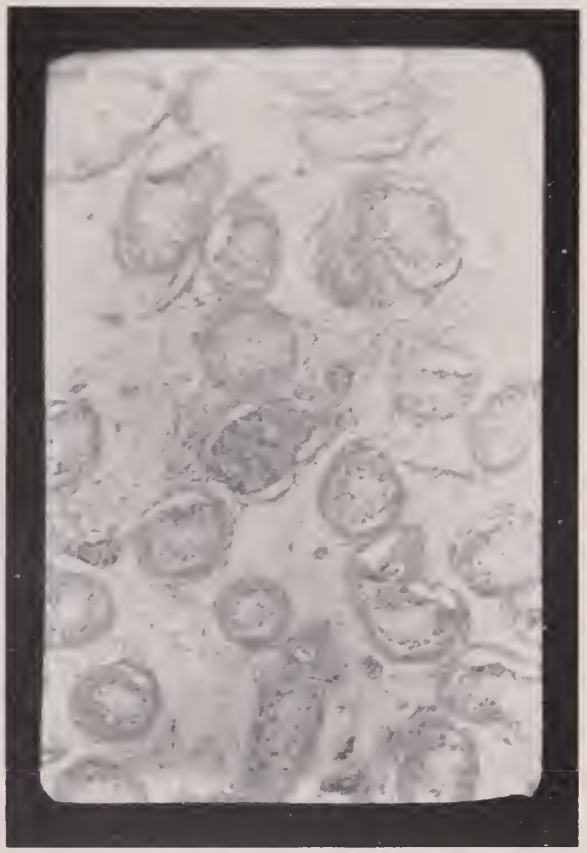


Fig. 3—Photomicrograph of testis showing atrophy and fibrosis. Most of the round structures seen here are seminiferous tubules. The central, dark area is metastatic carcinoma in a vein.

The patient has done well following the orchidectomy, and is still being maintained on stilbestrol therapy. When last seen in November, 1956, x-rays of the pelvic bones still revealed no definite metastases. The patient was asymptomatic, and no change in the consistency of the prostate was felt on rectal examination.

DISCUSSION

The first case of carcinoma of the prostate with metastasis to the testicle was reported by J. H. Semans in 1938[1]. Helfert and Pinck reported the second case in 1944, and in 1948 Baird and Hare recorded a third[2,3]. All of the above authors thought that the metastases occurred by arterial extension or

embolism. This route of spread seemed reasonable since each case showed widespread metastatic lesions in bone.

Bradham reported a case of carcinoma of the prostate with no evidence by clinical examination or x-ray of metastasis, other than to the right testicle[4]. Considerable tumor tissue was demonstrated in the veins and tubules of the testicle and epididymis, but no emboli could be found. Hence, metastasis by the arterial route was regarded as unlikely. Retrograde venous extension or embolism or retrograde lymphatic spread were suggested as more likely possibilities.

Kay and his associates reported three cases of carcinoma of the prostate metastatic to the testes, and postulated that prostatic tumor may descend by way of the ejaculatory ducts to ultimately reach the epididymis and testes[5]. They reasoned that in such a case, tumor would be found in the spermatic tubules, as indeed it was in one of their cases and in Bradham's case.

Doubtless, more than one route of metastasis may be implicated in individual instances. Nevertheless, the idea of retrograde venous spread is more tenable when one recalls that the testis is supplied, not only by the internal spermatic artery from the aorta, but also by the deferential artery which sometimes arises from the inferior vesical artery. The inferior vesical, of course, is one of the main arteries supplying the prostate gland. The veins of these structures accompany their respective arteries. The veins of the prostate form a rich plexus in the vicinity of the gland, being part of the pudendal plexus around the lower part of the bladder and communicating with the vesical plexus. Likewise, the deferential vein from the testis and epididymis accompanies the ductus deferens to the base of the bladder where it breaks up into a plexus which joins the vesical and pudendal plexuses and then reaches the hypogastric vein[6].

Thus, tumor cells from the prostate may reach the pudendal and vesical plexuses and pass, retrograde fashion, into the deferential vein and thence to the testis. Similarly, lymphatic retrograde spread may occur in a parallel fashion, since the lymphatic channels are rather closely associated with the arteries and veins of these structures and follow similar courses.

The theory of arterial emboli for the dissemination of tumor from the prostate to bone has been favored by Willis[7]. This same idea has been proposed as a mechanism for the deposition of prostatic carcinoma metastases in the testis by Semans, Helfert, and Pinck, and Baird and Hare[1,2,3].

Our feeling is that Batson's theory of pelvic tumor spread by the vertebral venous plexus serves to explain many of the metastases seen in prostatic carcinoma without implicating arterial emboli[8]. Prostatic carcinoma metastatic to the corpus cavernosa of the penis in some cases is thought to occur by retrograde venous spread from the pudendal plexus through the deep dorsal vein of the pelvis[9]. Batson has shown that the deep dorsal vein of the penis has connections with the vertebral veins, and hence it is possible for carcinoma of the prostate to metastasize to the vertebrae or even to the skull and brain without passing through the heart and lungs. We think that the testicular metastases in our case are best explained by retrograde venous and lymphatic spread.

Kay and others believe that testicular metastases from a primary prostatic carcinoma are more common than the literature would indicate, and postulate that failure to perform routine pathological examinations on testicular material may acccunt for this[5].

The eighth case of carcinoma of the prostate metastatic to the testes that we located in the literature was not reported as such. Involvement of the testes was simply an incidental finding among many widespread metastases[10].

Our case was recognized clinically because it was a circumscribed tumor nodule brought to the physician's attention by the patient. This fact plus the presence of known prostatic carcinoma with long-standing bony metastases was good evidence for the clinical diagnosis of metastatic carcinoma in the testis. The finding of tumor cells in the small veins and lymphatics of the testis, but not in the arteries or seminiferous tubules would lend weight to the theory of retrograde venous and lymphatic spread as the mechanism of testicular metastases.

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Fatigue Treatment

Rest is not "a universal panacea" for fatigue, even among aging persons. In many cases, activity is a better remedy, especially when the fatigue results from "atrophy of disuse," Dr. Theodore G. Klumpp, president of Winthrop Laboratories, Inc., said.

In the absence of specific disease as a cause of fatigue, it arises in older persons from the normal physiological processes of aging which reduce the body's endurance; from loss of incentive, motivation, and interest; from a decline of glandular activity, and from "atrophy of disuse."

Fatigue is "a normal incident of normal living," but when its pattern changes radically or it interferes with ordinary activities, it becomes a serious problem and needs medical attention, Dr. Klumpp said in the October 5 Journal of the American Medical Association. His article is one of a series on aging.

"For a long time, the approach to the problem of fatigue was thought to be simple. A brief history of the patient's mode of life was obtained with one objective in mind—to cut out something.

"It made little difference how little the individual was doing—if the patient was tired, something had to go . . . if the patient did nothing more than sit in a rocking clair all day, he was no doubt advised to stop rocking and go lie down."

Now physicians know better. Following the surgeons' practice of getting patients up soon after surgery, they now prescribe physical activity.

The pattern of American life is specifically designed to avoid physical activity and stress—to the point where physical exertion is virtually eliminated, the author said. Young people are able to keep in relatively good physical condition through sports and play, but, as they grow older, they tend to give up these things. With the help of "labor-saving devices, now including electric golfmobiles," they begin to suffer rapidly and too early in life from atrophy of disuse.

This brings with it a loss of muscular tone and functional reserve of all parts of the body, so that the slightest added stress causes undue fatigue. Maintaining an adequate physical reserve against stress is the best preventive for such fatigue.

Fortunately some degree of fitness can be regained through a program of graded exercise at any time, except where its loss is due to advanced organic disease. The exercise should be fun for the patient and should not be drudgery. Along with the exercise, the aging patient also needs an adequate amount of sleep at night and if necessary a short nap at midday.

Undue fatigue occurs more commonly among overweight persons. In addition to the obvious diet, the doctor should prescribe some type of exercise, despite the traditional "hearsay to the contrary," Dr. Klumpp said. Its greatest value lies in its stimulating effect on endocrine gland activity and in overcoming the tendency "to sleep and snooze too much —a common counterpart of obesity."

Dr. Klumpp also noted that much fatigue in aged persons occurs because they lose their incentive and interest in life. Then the doctor must help the patient find a "new and absorbing interest."

Neurological Diseases in Relation to Motor Vehicle Operation, Driver Misfits

How Best to Test for and Weed Out the Mentally and Physically Incompetent Driver

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ALL PERSONS interested in medical disease and driving license should review the book, *Epilepsy and the Law—A Proposal for Legal Reform in the Light of Medical Progress,* by Roscoe L. Barrow and Howard D. Fabing, M.D., a Hoeber-Harper book (49 East 33rd Street, New York 16, N. Y.). It is the first major document to clarify the legal and social status of the epileptic in this country. To quote from the foreword, "a lawyer and a physician have collaborated in bringing together information never before assembled in one place."

The number of epileptics in the United States is estimated to be between 800,000 and 1,500,000. The exact number cannot be determined because social attitudes and laws drive unknown numbers "underground".

Epilepsy may occur as (1) Grand mal or major seizures. These persons have a convulsion with loss of consciousness and tonic-clonic movements, tongue biting and possibly soiling. This loss of consciousness lasts one minute or longer. (2) Psychomotor seizures occur with loss of consciousness; they may have purposeless psychomotor activity, motor movements and acts without conscious awareness. There is amnesia for the event and in some irrational behavior. (3) Jacksonian seizures, unilateral seizures that are characterized by convulsive movements and not associated with loss of consciousness. (4) The small seizures or petit mal seizures are short absences of consciousness. They may be the "short stare", momentary loss of consciousness, the akynetic seizure, with sudden loss of body tone and loss of consciousness, or the myoclonic type with brief jerking of the arms and loss of consciousness. The small seizures are brief in duration, often momentary, and rarely last over thirty seconds, never over a minute.

Text of address before "The Association of Judges of County and Municipal Courts of Virginia" called by the Governor on November 16, 1956.

The grand mal, psychomotor, and Jacksonian seizures are associated with some etiology, such as trauma, infection, toxin, neoplasm, vascular or degenerative or systemic condition and so are also called symptomatic seizures. The small, or petit mal, seizures have no known cause, a high hereditary component, and are known as idiopatic seizures. It is rare to find petit mal epilepsy in persons after the age of twenty.

The primary treatment in control of epilepsy is through drugs. In some, surgery becomes an indicated procedure. Dilantin, phenobarbital, mysoline, tridione and paradione are the most frequent drugs used. Toxicity and side reaction of these drugs may be ataxia, unsteadiness, or somnolence.

In treatment of epileptics, 60% can be well controlled, 20% greatly improved, and 20% controlled with difficulty. Although complete control of seizures is estimated in 50% of the cases of epilepsy, 80% may be controlled to the point of leading useful lives.

The automobile is a part of our way of life. The privilege of driving is important. Denial deprives a person of work, transportation, and pleasure; it is a serious problem in rehabilitation. To deny driving to a seizure free epileptic does not increase traffic safety. Only epileptics who are capable of driving with reasonable safety should be granted the driving privilege. Epileptics may become safe driving risks because the seizures have ceased with or without treatment and then on medication continue free of seizures. To grant these persons, free of seizures, a license "a procedure must be adopted that will provide a reliable basis for determining those persons having a history of seizures who have become safe driving risks." Denying license to all epileptics and requiring physicians to report their epileptic cases to the motor vehicle licensing agency will drive epileptics "underground" and even deny themselves treatment for fear of being reported by

physicians and increase false application that may constitute a driving risk or ineffectual traffic safeguard. These epileptic persons run a risk to themselves in chancing an accident which they may rationalize, but to injure or kill another person because of that chance is not fair nor would they even wish it. So the statutes are constructed to protect, even if to deny, not just the individual in question but the other persons who are driving. They should understand that legislation is fair, they should seek treatment, and after the seizures are controlled for a reasonable period of time, to make application for a license, fully discussing the history of seizures, treatment and control. With proper education and conditioning most of those unfit to drive will accept their position. It must be expected that some who are found unfit will drive surreptitiously as they do now. Education and understanding of the law through parents, teachers and patients will reduce this number who surreptitiously drive. These measures will achieve a greater degree of traffic safety.

Licensing maintains traffic safety without placing unnecessary restrictions on the driving privilege. Epileptics whose seizures are controlled may be issued a limited drivers license. Nearly all patients have a basic pattern, frequency, severity, and type of attack. Physicians trained in the diagnosis and treatment of epilepsy can determine those epileptics whose seizures are under control. Re-examinations can determine changes or new developments in the individual's case. The special committee on legislation of the American League Against Epilepsy has recommended a seizure free period of one year as an adequate period for determining whether a controlled epileptic is a safe driving risk.

An important consideration in granting licenses to controlled epileptics is whether they are eligible for liability insurance and thus able to comply with a state's financial responsibility regulations. Ideally the medical expert and traffic expert should have appropriate voice in determining as to whether the license should be issued. A safeguard and a better basis would be to have an administrative hearing. The composition of the board should include physicians qualified in the diagnosis and treatment of epilepsy, a representative of the agency charged with the issuance of insurance and a licensing official. The case thus can be examined on its merits and licenses may be issued to controlled epileptics with reasonable safety to themselves and to other users of the highway. The eligibility of the epileptic for liability insurance and being able to comply with the state's financial responsibility law is important. Epileptics issued limited licenses in Wisconsin have been able to obtain full coverage at premiums uprated only 5%.

A medical board procedure has been established in Wisconsin by statute. The administrator is given authority to grant licenses upon certification of the attending physician that the applicant is under treatment and free of seizures. The license is granted when the patient has been free of seizures for two years. If the administrator denies the license, the applicant may have an administrative hearing review before the board. The board consists of the administrator or licensing official designated by him and two physicians qualified in the diagnosis and treatment of epilepsy. The physicians are appointed by the Board of Health. If the license is granted, the Board's decision is binding. The license is renewable every six months upon re-certification by the attending physician that there has been no recurrence of seizures and that the applicant is continuing medication and under medical supervision.

Other neurological diseases considered a hazard and needing medical observation or opinion regarding their safety in driving are: chorea, diabetes, muscular incoordination, hemiplegia, hypersensitive carotid sinus, some degeneration diseases of the C.N.S., fainting, some cases of heart disease, cases emotionally or mentally unfit to drive, alcoholic offenders, accident prone individuals and others. These conditions should be given the same legal consideration in the interest of the safety of the public and appropriate medical experts could be appointed or recommended by the Board of Health to evaluate these conditions in serving on the board for licensing drivers.

I have spent the greater part of my time with epilepsy, or those conditions causing loss of control through loss of consciousness, because they present the major problem. The solution to epilepsy as a hazard in driving will solve the problem of highway safety as affected by other medical syndromes.

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212 West Franklin Street
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Abdominal-Thoracic Pain

A Diagnostic Challenge

NATHANIEL H. WOODING, M.D.
Halifax, Virginia

IN THIS COMPLEX, present day society there are few physicians, regardless of their avowed specialty, who are not frequently asked to give at least an "in the saddle" interpretation of a patient's complaint of pain in the chest or abdomen. To make the matter more difficult, the outcome more doubtful and the reply harder, somewhere in the interview the patient is apt to ask, "Is it my heart, doctor?". The following case will illustrate what I mean: On 14 February 1947, L.F.T., 41, white, male, farmer, consulted me for pain in his right arm. A brief note reveals that I gave him 2 cc's of Aqua B. Sodium Salicylate Enseals and codeine sulfate. He came back the following day and I prescribed diathermy and pantapon. He was subsequently seen by another physician, observed, and allowed activity. On the 24th of March of the same year he went out to the wood pile and on his return to the house fell dead in the path. My notes here are admittedly scant but there was nothing seen by two doctors which suggested the fatal outcome.

The above case, plus several more to be discussed later, has made me ask who is the marked man for coronary artery disease, how can we recognize such a person, what can we do about it? The classical picture of coronary artery disease is known to all of us. Dr. Adam Hammer of St. Louis is credited[1] with the first case correctly diagnosed in life and this only eighty years ago.

He was followed in this by George Dock, Sir William Osler and James B. Herrick. This condition is dramatic; the patient, if he lives, demands that something be done, and in many cases such is possible, to the end that the patient is restored to useful life. The present state (according to latest newspaper and radio reports) of President Eisenhower will attest to this.

There is, unfortunately, a problem facing those of us engaged in the practice of medicine, regardless of how we are designated, which is more difficult to solve and often attended with an unhappy termination. The causes of pain in the chest and abdomen are legion. Current text books give complete lists[2,3]. Master[4] has tried to distinguish cardiac from noncardiac pain. For brief review we can list:

a. Angina pectoris.
b. Pericarditis.
c. Pleurisy.
d. Pain as related to intrinsic lung disease.
e. Diseases of the mediastinum.
f. Diseases of the cervical and thoracic spine and the shoulder girdle; as arthritis, bursitis, ruptured intervertebral discs, herpes zoster, diseases of the mammary glands, and the myalgia that accompanies so many infectious processes or might even follow overwork.
g. Conditions of the diaphragm and related structures: as hiatus hernia, oesophageal spasm and ulcers and cardiospasm.
h. Diseases of the upper abdominal cavity as peptic ulcer, gall bladder disease, disease of the pancreas and of the transverse colon.
i. "Acute Indigestion". At this term the younger doctors may laugh, but those older than I will understand me if I add that in my work as County Medical Examiner I have seen three cases of the "slop jar syndrome", where the deceased was found slumped over a combinet, having died in the act of vomiting. This might now be called acute coronary occlusion. Truly the matter of making a differential diagnosis is not easy.

Having recognized some of the possible causes of chest and abdominal pain, and still remembering the case mentioned a few minutes ago, we ask how are we to recognize early coronary artery disease; I would say "latent", but is it latent when the patient has come to us with the complaint of pain? It has been charged that we have been prone to depend on machine made diagnosis[5], and to this we reply that we have our clinical findings. The following case has just recently given me the humility of the neophyte. J.M.L., 54, a white, married farmer, was first seen by me on the 23rd of August,

Presented before the South Piedmont Medical Society, Danville, May 30, 1956.

1951, complaining of epigastric pain which was relieved by food. On the 8th of August, 1953, he complained that it felt as if food would not pass into his stomach and he had difficulty in eating. On July 26, 1955, there was abdominal distress which appeared while he was pulling tobacco. The pain was in the epigastrium. It was relieved (?) by Amphogel. On September 26, 1955, there was pain in the chest and right arm, recurrent, moderately severe. He was given Peritrate; late the same day he returned, this time with increased breath sounds in both bases, and was given penicillin and an analgesic. On January 30, 1956, he was seen by me for the last time, complaining of distress in his chest. My physical findings did not indicate disease. He had in the past month been seen by two other local physicians, one of whom had told him to stay in bed, the other had obtained an apparently normal electrocardiogram. I prescribed Probanthine. Four days later he died in a car in front of my office. Survivors include a 39 year old widow and six young children.

As a clinician I ask, how am I to recognize early heart disease? Sprague on Examination of the Heart[6] concludes that severe organic heart disease may exist in the complete absence of any positive findings obtained by physical examination. Insurance companies, in their instructions to medical examiners, stress certain base lines in pulse rate and blood pressure; one[7] gives blood pressure of 145/90 and/or pulse of 90 or over as cause to undertake special cardiac studies. Lest it appear that such information will safely guide us in our advice to our patients, let us look at this case. D.E.M., a 53 year old white male was first seen by me on the 26th of December, 1948, complaining of epigastric distress. He admitted drinking too much and eating poorly. Physical findings were essentially normal. He was next seen by me on the 7th of December, 1949, complaining that "heart beats too fast". He felt "shaky". Physical examination and history were negative for organic disease. Four days later he was seen at home, complaining of pain in arms. Blood pressure was 100/70, pulse was regular, chest was clear. He thought he had been eating too much. Despite what I found, I treated him with 100 mgm. of Demerol intramuscularly, amyl nitrite perl and tablets of nitroglycerine. A week later he said he felt very little better. It was suggested that he go to the Duke Hospital out-patient department for further study. He died the following morning before getting out of bed.

The several writers quoted stress the need for a good previous personal and family history in investigating chest complaints. The following two cases will leave us confused. W.L.D., white, married farmer, of about 55 years, was seen at his home in the mid morning of January 28, 1952. He complained of substernal pain, sudden in onset, which had caused him to drop to the ground. My only positive finding was blood pressure of 180/90. I could obtain no relevant history. I gave him an antispasmodic. He died in his sleep at 11 p.m. the following night. I learned afterwards that a brother had died while sitting at a table eating. The other case is O.C.M., a 58 year old, white, married merchant who was seen for the first time on November 28, 1947. He said he felt bad and that his legs gave out. The most positive of the physical findings was a general appearance of premature aging. The family history was negative for heart disease. His blood pressure was 130/70. Six weeks later he complained of being nervous and sleeping poorly. His blood pressure was 170/100. It was January 6, 1950, when I next saw him, with blood pressure of 160/90 and similar complaints. Four months later he felt better, pulse was regular, blood pressure was 140/70. Some 18 months later he said he had a feeling of "being filled up" in the substernal region. There were no other complaints, blood pressure was 170/100. In early 1953 he had multiple complaints but the only positive findings were a temperature of 99 degrees and a few pus cells in the urine. He died suddenly on October 3, 1953, at that time under the care of another doctor and after having been ill for only one day.

Of the cases listed, with the possible exception of the fourth, the probability of coronary artery disease was not great. That any one of these men would have been accepted for life insurance is not certain, for the fact they had sought medical care might be used as a sign that they were not well. In several of the cases the total picture was not that of vigorous health, yet they were hardly much different from many other people whom we know as patients.

SUMMARY AND CONCLUSIONS

1. Whereas so much stress has been given to variations in the character of the pulse and the presence of various heart murmurs, to the end that many people who are without complaint have been made cardiac cripples, I believe that complaint from the patient of chest pain, especially if it is atypical,

deserves sober consideration on the part of the clinician.

2. So far, laboratory aids, including the electrocardiograph, can help but cannot give the complete story. Complete histories with careful physical examinations, with due attention to the patients' occupations, modes of living, family backgrounds and past infections or diseases will help us to avoid some errors.

3. In making the differential diagnosis, avoid a conclusion that is reached by exclusion. Of the possible diagnoses, the more probable ones can be selected on the basis of a complete evaluation of the patient, and each of these probabilities in turn should be examined on its own merits, always asking ourselves, "why can't it be heart disease?". Even if we are convinced that our patient has a neurosis and we have obtained for him psychotherapy, we must not forget that he can develop a coronary thrombosis. J. B., a white male, married, tobacco auctioneer, now about 55, for many years complained of distress in his chest, would accept reassurance from no one, yet finally had a posterior wall infarct from which he has apparently made an uneventful recovery with a dispersion of many of his previous complaints.

4. Of the diseases of the coronary arteries which produce chest pain we have three well established syndromes:

(a) Thrombosis, characterized by shock, followed by elevation of temperature and increase in the sedimentation rate with leukocytosis.

(b) Angina pectoris, related to effort, substernal in location, constricting in character, transitory in nature[9] and relieved by nitroglycerine.

(c) Coronary failure, described by Blumgart[2] in which there is cardiac (chest) pain too prolonged to be consistent with angina pectoris, but lacking the elevation of temperature, leukocytosis and increase in sedimentation rate which are present in acute myocardial infarction.

(d) I propose a fourth symptom complex: the relatively healthy person who comes to us because of pain in chest or abdomen, pain for which we might never even think to treat with nitroglycerine, which more frequently resembles that produced by other diseases, with laboratory findings within normal limits; but who dies suddenly with few if any of the presently accepted symptoms of coronary artery disease.

5. Of the various body changes causing pain in the chest or abdomen, the greater number may be diagnosed by a carefully taken history and a conscientious physical examination, but it would appear that atypical coronary artery disease may exist unrecognized despite all our diagnostic aids, and go on to sudden and fatal termination.

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Let's Reminisce!

Snow as a dressing for wounds, and hemostatic in surgery. Dr. O'Hasser recommends for certain operations—especially in tracheotomy—that instead of sponges, freshly fallen snow should be applied to the parts. It absorbs the blood splendidly, acts as an astringent upon the blood-vessels, and as an anaesthetic upon the nerves. The snow should be loose. (Virginia Medical Monthly, August 1875)

Correspondence . . . .

Editorial "We"—Chronic Disease.

To the Editor:

We have little defense against the essayist who discourses with such vigor against the editorial "we" in the September issue of the Virginia Medical Monthly. May we say to him: Thou hast presented thy cause well.

We may be listed among that black herd guilty of perverting our mother-tongue. Perhaps we feel a genteel aversion to the frequent use of the first person singular in formal discourse especially when our pronouncements are not often equal in gravity to those of a Leibnitz. Perhaps in presenting a patient we make subtle acknowledgement of the several ancillary medical aids (clinical pathologist, radiologist, other consultation) that went into the final evaluation, even though the final responsibility for such evaluation is ours.

Let us (or is it "Let me"?) hope that with maturity come tolerance, mellowness, freedom from that slavish pedantic adherence to linguistic rectitude that characterized the callow earlier years of many of us, and the wondrously significant revelation that rules subserve lucid communication, and not *vice versa.*

Sincerely *thine,*
Christian Virgil Cimmino, M.D.

September 14, 1957.
Fredericksburg, Va.

Experiences with Nicotinic Acid in Diabetes Mellitus.

To the Editor:

I feel that the article in the August, 1957 issue, page 403, titled "Experiences with Nicotinic Acid in Diabetes Mellitus", by Dr. Leo Halley, should provoke some discussion.

While the author attempts to be semi-conservative is his summary, the article itself is much more radical and practically invites a diabetic on insulin to stop taking it. The mere appearance of "feeling good" although not taking insulin may be all right, but without laboratory controls the patient's eyes, kidneys and vascular system in general may be beginning to pay the toll which will be exacted with interest several years later as a result of loss of some semblance of control of the diabetes.

As an extreme example in contradiction to this type of article, the American Diabetes Association's "ADA Forecast" Magazine published about four years ago an article about a 19 year old girl who was persuaded to stop taking insulin by a faith healer. She substituted prayer for insulin and lived a total of 60 hours after her last insulin injection.

Sincerely yours,
Edward G. Davis, Jr., M.D.

October 1, 1957
Richmond, Virginia

Let's Reminisce!

Danger of sleeping in rooms containing fragrant flowers and fruits. The volatile matieres breathed out from flowers and fruits possess in high degree, on account of the extraordinary fineness of their division, the tendency and power to absorb the oxygen from the surrounding atmosphere, and to give out in its place a corresponding quantity of carbonic acid, thus injuring the salubrity of such air for people living therein, in a two-fold manner—first, by diminishing the life-air (oxygen); second, by increasing the fatal carbonic acid. As these facts are sufficiently well known, though too little regarded, they merit being from time to time spoken of and accompanied by warning examples. (Virginia Medical Monthly, November, 1875)

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

Pre-Existing Conditions

The Blue Cross-Blue Shield Plans in Virginia, like all the other "Blue" Plans in the United States, have a few special limitations and restrictions to the benefits available to a new Subscriber during the first twelve months of his membership. The most frequently applicable—and perhaps the least understood—of these first-year restrictions is the one pertaining to "pre-existing conditions"; physicians frequently write the Plans' office to inquire about claim-denials which have been based on the pertinent provision of the Subscriber-Contract.

For example, a typical doctor's letter states: "Mrs. Smith did not have her trouble correctly diganosed until her recent hospital admission and yet Blue Cross-Blue Shield classified her condition as 'pre-existing' and denied her claims". In this case, Mrs. Smith had joined Blue Cross-Blue Shield six months before the hospital admission in question; but, according to her medical history, it was prior to that date that she became aware of objective as well as subjective signs and symptoms referrable to the pathology that subsequently brought about her admission. This fact established her condition as "pre-existing", and such conditions are not provided for during the first year of membership.

After twelve months of membership, however, full contract benefits would be available to Mrs. Smith for this or any other condition, no matter when its onset.

Unfortunately there is no clear-cut way to administer the "pre-existing condition" provision of first-year Blue Cross-Blue Shield Contracts. Obviously it would not be equitable—nor understandable to the Subscriber-patient—to base decisions about "pre-existing conditions" on medical knowledge or opinions concerning the time it takes various pathological conditions to develop. Were the Plans to take cognizance of medical opinions about etiology, a member of ten months standing who was hospitalized for a brain tumor would have his claim denied even though the tumor had been completely asymptomatic until four or five months prior to admission. That would not be right. On the other hand, a member of five months standing whose admission was due to severe headaches of ten months duration equitably should have his claim denied, irrespective of what was found to be the cause of those headaches.

Nor would it be proper to use as criteria for "pre-existing conditions" the actual dates on which diagnoses might be made. If a patient delayed consulting a doctor, or if the doctor made an inadvertent error in the diagnosis, the Plans would incur financial liability for a case which, in the light of subsequent knowledge, obviously pertained to a "pre-existing condition".

Accordingly, when investigating a questionable claim that has been submitted in behalf of a first-year member, the Plans obtain information from the personal medical history of the patient involved and use as the criterion of "pre-existence" the date on which the patient himself was first cognizant of signs or symptoms referrable to the pathology.

New Subscribers are advised about the one year waiting period before pre-existing conditions will be covered; a pertinent denial should not come as a surprise or disappointment to them. Notice of the first-year exclusion of *"conditions which existed on or prior to the effective date of participation, including exacerbations or complications of such pre-existing conditions"* appears on the Application Forms signed by Subscribers, as well as in the Contracts proper, and the Plans' promotional literature also gives notice of the year's waiting period new members must serve before they shall become eligible for services for *"conditions or defects existing at the effective date of the Contract"*. In this regard, however, the Plans have not yet found a way by which they can make new Subscribers fully realize that the Plans necessarily must impose a few limitations and restrictions upon the benefits of membership.

Waiting periods, of course, must be imposed for financial reasons, not just to protect the Plans from defrauders. It seems only proper that the prepaid funds of members of long standing should be spared the expense of providing services for a new member whose condition was subjectively symptomatic prior to the time the new member made any contribution to those funds.

Mental Health . . . .

L. SZABO, M.D.
C. H. G. KENDALL, M.D.

The Laurence-Moon-Biedl Syndrome, Report of Two Cases

I. *History*

The names associated with this rare syndrome are those of John Zachariah Laurence, an English ophthalmic surgeon; Robert Charles Moon, an American ophthalmologist; and Arthur Biedl, a Czechoslovakian physiologist. In 1866, Laurence and Moon reported the occurrence in the same family of four cases of retinitis pigmentosa associated with general imperfections. Actually, Hoering had described a similar case in 1864, and in 1865 Stoer had described another one. The syndrome is now considered to be an inherited endocrine disturbance of the pituitary, or more probably of the hypothalamic structures, characterized by girdle type obesity, hypogenitalism, mental retardation, polydactyly and pigmentary retinal degeneration. It must be stressed, however, that the syndrome is often incomplete. This bizarre and rare combination of abnormalities attracted no further attention until the turn of the century.

In 1901, Froehlich described his now well-known syndrome of dystrophia adiposo genitalis. This syndrome is more correctly called Babinski-Froehlich's disease, as Babinski wrote the first description of it in 1900. In 1908, Nettleship, reviewing the literature on retinitis pigmentosa noted a resemblance between the cases reported by Laurence, and other cases of retinitis pigmentosa reported by Hutchinson in 1900. It was established that both Hutchinson and Laurence had seen the same cases with 25 years' interval. Hutchinson regarded the eye condition as due to "disease of the choroids". Leber, in 1916, regarded them as cases of gyrate atrophy associated with general defects. Both of these writers seemed to have missed the fact that retinal changes and associated defects constitute a syndrome, and this recognition came not from ophthalmologists but from students of endocrinology, the stimulus being given by Froehlich's work.

Thus in 1908 Sievert described an incomplete Froehlich's Syndrome in two out of eight surviving children, in whom there was present optic atrophy in addition to obesity. In 1912, von Jaksch reported a case of Froehlich's Syndrome with mental defect and optic atrophy, and atypical retinitis pigmentosa. The patient also had six fingers on his left hand. In 1913, Rozabel-Farnes reported a Froehlich's Syndrome with polydactyly and visual disturbances with optic atrophy starting at the age of 3. Retinitis pigmentosa does not appear to have been present. In the same year, Bertelotti described a case of Froehlich's Syndrome associated with mental deficiency, atrophy of the disc, and retinitis pigmentosa with polydactyly on the right hand and both feet. Dwarfing was also noted. Bertelotti held that Froehlich's Syndrome with polydactyly constituted a distinct syndrome. Madigan and Moore, in 1918, noted mental deficiency in association with Froehlich's Syndrome. That dystrophia adiposo-genitalis, retinitis pigmentosa, and polydactyly constitute a unit syndrome was clearly recognized by Bardet in recording an isolated case of this association in 1920. However, he failed to appreciate mental deficiency and familial occurrence as part of this syndrome. Two years later Biedl showing two sibs, expanded the syndrome to include congenital malformations (atresia ani, polydactyly and deformities of the skull) and peculiar disturbances of digestion. He recognized the condition with or without hypogenitalism. His patients showed no detectable changes in the pituitary gland, no sign of cerebral tumor or increased intracranial tension. Diabetes is mentioned as a concomitant disease. Raab, who reported Biedl's cases in full, speaks of the syndrome as consisting of retinitis pigmentosa, polydactylism, adiposity, genital hypoplasia and mental deficiency.

Solis-Cohen and Weiss in 1925, in reporting four cases in one family drew attention to the original work by Laurence and Moon, and at the suggestion of Solis-Cohen and Weiss, the condition became known as the Laurence-Biedl Syndrome. However, it is generally known today as Laurence-Moon-Biedl Syndrome. It is of interest to know that the syndrome was fully described in the United States by Gordon in 1907 but he too missed the significance and recorded two cases, brother and sister, aged 9

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Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

and 14 years, respectively, showing mental dullness, polydactyly, obesity and, in the case of the boy, hypogenitalism associated with markedly defective vision, as cases of late Tay-Sachs disease. As late as 1932, Junius still records these cases as unusual cases of Tay-Sachs disease.

In an excellent paper by Cockayne, Krestin and Sorsby in 1935, the authors report on 30 isolated cases and 15 familial groups collected by several writers over the 10 year period preceding publication of the paper. In nearly all the reports, the parents were referred to as healthy. In no case did either of the parents or other ascendants exhibit the syndrome. Occasionally, however, obesity was reported in one or more ascendants; psychic disturbances and polydactyly are reported in a few. Consanguinity in the parents was occasionally reported. The striking feature was the history in the majority of cases of suggestive lesions in deceased members of the sibship.

II. *The composite picture of the syndrome is as follows:*

A. Obesity is constantly of the Froehlich type, and usually dates from infancy. Rarely it develops later after some illness early in life. In males, after puberty, the skin remains smooth. Hair is absent usually, or is very sparse and, if present, of a feminine distribution.

B. Hypogenitalism is not always present nor easily determined, particularly in the case of girls before puberty. In boys, the penis may be so buried in fat as to appear smaller than it actually is. In a case reported by Denzler in 1925, and seen 12 years later by Willi, hypogenitalism was slight at first and final development was normal. In Ross, Crome and MacKenzie's case at the age of 20, when he weighed 175 lbs., the penis and testicles were "rather small". When he died of acute on chronic pyelonephritis four years later, the testicles and penis appeared to be within normal size limits, although histologically the testes showed arrested development. Unfortunately, the authors do not say whether the boy had lost much weight in the four years preceding his death. It is conceivable that gonadotrophic hormones, being very fat-soluble, are taken up avidly by the adipose tissue and stored there before reaching their target organ (Sodeman). When the patient loses his fat, the sex hormones fulfill their normal function.

C. Mental development. Rieger and Trauner report a case with normal mentality. Biedl and Raab, Bernhardt, Clay, Ornsteen and Willi described patients who showed only slight mental changes.



Case No. I

Otherwise, the majority show a mental deficiency which may be in the nature of a failure of development or of a disintegration of a full developed mentality. However, most affected children were noted to be backward from early infancy.

D. Polydactyly. This is a common defect of humans and animals and may affect one or more

extremities. Up to 13 digits have been reported. In the Laurence-Moon-Biedl Syndrome, 6 digits on both hands and feet are found. The 6th digit is always in the post axial position. Syndactyly of the third and fourth toes commonly occurs. The hands are pudgy with short thick fingers.

E. Retinal degeneration with pigmentary disturbances, frequently complicated by cataract, is present in all recorded cases except one rather dubious example of Turner's. Generally, nystagmus and night blindness early in childhood are first noticed. Progressive loss of vision follows. The picture is not always that of typical retinitis pigmentosa with its characteristic "bone corpuscle" pigment along the retinal vessels toward the periphery. Sometimes the appearance is that of cerebromacular degeneration. There may be a variety of pigmentary disturbances associated with retinal degeneration, ranging from typical retinitis pigmentosa to almost every conceivable form of a typical pigmentary disturbance. In fact, typical retinitis pigmentosa would appear to be the exception. Pigmentary disturbance of the retina, which sometimes takes the form of retinitis pigmentosa is thus the fundic characteristic for the Laurence-Moon-Biedl Syndrome. The eye signs, however, differ in one important respect from those of typical retinitis pigmentosa in that the juvenile onset of a severe fundic lesion is uncommon in classical retinitis pigmentosa.

F. Associated Conditions: The following have been described: Hyperparathyroidism, hydroenphrosis, hypospadias, microcephaly, oxycephaly, brachycephaly, genu valgum, dislocation of both patellae, kyphoscoliosis, congenital heart disease, head nodding, choreiform movements, muscular weakness, and dwarfism in most cases. Output of 17 Ketosteroids tends to be lower than normal, probably due to testicular underdevelopment.

III. *Pathology*

Up to 1955, about three hundred cases have been reported. Cases where autopsy has been done amount to 10; in these, autopsy was incomplete in six and the eyes were examined in only two cases. Ross, Crome and MacKenzie, in 1956, report a case and review the available postmortem findings in the literature. In their cases, death was due to uremia, resulting from acute on chronic pyelonephritis, which the authors say is a common cause of death in this syndrome. At postmortem examination six hours after death, the body was that of a pale edematous young man with scanty pubic hair, but testicles and penis were within normal size limits. The axilla showed only a few fine hairs and there was very little hair on the face. Scars of amputation of supernumerary digits were present on the hands, and there was partial syndactyly between the second and third toes of both feet. Significant findings were slight



Case No. II

atrophy of the frontal lobes, ascites, enlarged liver, uniformly contracted and congested kidneys, and the bladder showed severe edema of the mucosa and patchy inflammation.

The authors tabulate 10 cases reported between 1936 and 1956. There was a positive family history in five of these. Obesity was present in nine of them, mental defects in eight, polydactyly in six, retinitis pigmentosa in six, and doubtful in three. Genital hypoplasia was present in all of them. The causes of death were, uremia in six cases, cardiac failure in one, carcinoma of the esophagus in one, measles in one, and cerebral trauma in one. There are no constant pathological appearances and no apparent common factor in the number of cases which have been examined.

IV. *Genetic Behavior*

1. The ratio of affected to normal children within the sibship. The corrected ratio is 1 to 1.71, which is very close to the ratio found in rare recessive defects such as xeroderma pigmentosum.

2. Sex ratio: There appears to be real preponderance of males over females with this defect. From the figures available, it appears to be about 1.5 to 1.

3. Mode of Inheritance: It would appear that the syndrome is inherited as an autosomal recessive, but it is most unlikely that a mutation of a single gene

causes both the skeletal defects and retinal changes, with mental deficiency, obesity and hypogenitalism. Polydactyly and other skeletal defects are due to an abnormal division of the primitive mesenchyme, or



Case No. II

to some other mesodermal error of development, whereas the rest of the syndrome depends upon an abnormality of the retina and diencephalon, which are ectodermal. Sorsby et al agree with Rieger and Trauner in believing that both parts of the syndrome are recessive, and that it is an example of linkage, and is due to mutation of two genes in the same chromosome. The condition is a very rare one, but has occurred in Latin and Teutonic races, and has been recorded in Europe and North and South America. In 1935, it had not yet been described in Negroes, Mongols or any of the races in India. Sorsby et al advance the interesting theory in which they state that the chances are very remote that two genes in the same chromosome would mutate together each in the same way on two separate occasions, and it is probable that the families in which the syndrome has appeared are descended from a single individual in whom the double mutation took place, though, if this be the case the mutation must be a very ancient one.

4. Relationship to Tay-Sachs disease (Amaurotic family idiocy). The two conditions have no real connection. In the type of amaurotic idiocy which occurs at about six years (i.e. the juvenile form of Spielmeyer and Vogt) the fundus may be indistinguishable from that of the Laurence-Moon-Biedl Syndrome. The cherry red spot at the macula, characteristic of infantile forms, does not appear. Instead there is retinal pigmentation and sometimes optic atrophy.

The following features, however, serve to distinguish the two conditions.

a. Mode of onset: Juvenile amaurotic idiots are quite normal until the second dentition starts; conversely a normal early development is exceptional in the Laurence-Moon-Biedl Syndrome.

b. The course: progressive blindness, increasing dementia, convulsions, paroxysmal seizures of laughing and crying, and death at about 15 years are usual in the cerebromacular type of degeneration. Laurence-Moon-Biedl Syndrome follows a slow almost nonprogressive course.

c. Neurological manifestations: amaurotic idiocy is a progressive degeneration of the nerve cells from the highest to the lowest leading to spastic or flaccid paralysis, and in some cases Parkinsonism.

d. Associated conditions: There are no convincing reports of any constant associated phenomena in amaurosis such as occurs in the Laurence-Moon-Biedl Syndrome.

e. Genetic behavior: There is no male preponderance among juvenile amaurotic idiots as there is in the Laurence-Moon-Biedl Syndrome.

V. *Conclusion*

Ross, Chrome and MacKenzie state that the Laurence-Moon-Biedl Syndrome is not of pituitary origin, and the ocular changes differ in no material

respects from those found in cases of isolated retinitis pigmentosa. Few brains from cases dying with this syndrome appeared to have been fully examined. Furthermore, most of the reports are not only incomplete but probably also not comparable with each other, since the results of neuropathological examination vary greatly with the methods employed and the areas examined. Also positive neuropathological findings are often of doubtful significance, on account of the difficulty of controlling these results against material treated in an identical manner. The authors conclude that it is still too early to form an opinion as to whether characteristic neuromorphological features of the syndrome exist, and in particular it was difficult to account for the low intelligence of the patients whose brains were found to be normal in size and showed no apparent cortical changes. It would appear that the cause of the Laurence-Moon-Biedl Syndrome is still unknown, and the number of cases examined postmortem is still too small to enable any opinion to be formed. All that is known is the Laurence-Moon-Biedl Syndrome is a genotypic inherited unit character defect of unknown cause.

Case No. I. D. F. No: 38302. This 17-year-old Negro was admitted into Central State Hospital four years ago with the diagnosis of severe mental deficiency. According to the available insufficient history, he is an illegitimate child. He depended on his mother for everything. The patients' mental peculiarity was first observed at the age of 2 years, and was manifested when he did not talk or act normally. At times he did not appear to see things; had poor vision. His symptoms are said to have developed gradually. The patient attempted homicide by getting a knife and threatening to cut off the heads of his sisters and brothers, whose number are unknown to us. He could not use dining utilities. His home environment is bad.

Height: 5′ 5¾″
Weight: 198 lbs.
Head Circumference: 20½″
Eyes: He is blind due to retinitis pigmentosa and optic nerve atrophy.
Hands and Feet: Short pudgy hands with tapering fingers, has had six toes and six fingers before surgery was done on him.
Genitalia: Small penis and testes.
Body: Female distribution of fat and hair.
Voice: Soprano

Reference from American, British, German and French literature.

BMR: - 6.
17 Ketosteroids: 6.2 mgms./24 hours.
IMPRESSION: Laurence-Moon-Biedl Syndrome.

Case No. II. F. D. W. No: 42057. This 37-year-old Negro was admitted into Central State Hospital in February 1957 with a diagnosis of Schizophrenic Reaction, Paranoid Type. The patient is the third of four living siblings. In addition, his mother had two stillbirths and one miscarriage and another child lived for two weeks. The father and mother were first cousins. The patient was born with "twin toes". He weighed 10 pounds at birth, and has always been large. At birth, the patient had a very small penis. His vision has been poor since early childhood, and he wore glasses from the age of 9. His vision became steadily worse in the last two years in high school. He was unable to read. An eye specialist told the family that the patient would probably become blind by the age of 25. During the past few years there has been a good deal of further visual deterioration, and the patient has been unable to find his way to places where he had been going for the last several years. His mother noticed that he would bump into her.

The patient has a brother who has poor vision also. His brother began to wear glasses in the first grade, and he stopped school in the elementary grade. His brother was born with "twin toes" also, and he has always been quite fat. The patient's father had an aunt and her daughter who were both mentally-ill. There are also two first cousins on the father's side who were mentally-ill, and some white relatives of the father were mentally-ill in addition.

Height: 5′ ½″
Weight: 158 lbs.
Head Circumference: 22″
Eyes: He is blind due to retinitis pigmentosa, optic nerve atrophy, cataracts.
Body: He is obese, but he does not have the characteristic female fat distribution; sparse hair.
Genitalia: Small penis, undescended testicle in inguinal canals.
Hands and Feet: Short pudgy hands with tapering fingers; had operation for removal of accessory fingers and toes. His right foot has six metatarsal bones.
Voice: Normal.
BMR: - 4
17 Ketosteroids: 14.2 mgms./24 hours.
Patient is not mental defective.
IMPRESSION: Laurence-Moon-Biedl Syndrome.

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Asian Influenza

Since the start of the outbreaks of influenza in the Far East last spring, the U. S. Public Health Service and the State Department of Health have endeavored to keep the public constantly informed regarding Asian influenza. The spread of the disease in various parts of the world, sporadic outbreaks in the United States, and more widespread developments in certain states have been reported. Information has been shared on the developments in the identification of the virus and in the testing, production, and distribution of a monovalent vaccine designed to combat the new strain of influenza.

The State Health Commissioner has represented the Association of the State and Territorial Health Officers at meetings with representatives of the Public Health Service, the American Medical Association, the American Academy of Pediatrics, the American Hospital Association, and other professional organizations, to plan emergency medical and related services in the event of an epidemic. The Commissioner has met also with the Executive Committee of The Medical Society of Virginia, and he has concurred in the actions of the committee in recommending to practicing physicians that they give priority to the following:

(1) those individuals whose services are necessary to maintain the health of the community

(2) those individuals necessary to maintain other basic community services

(3) those persons with tuberculosis and others who, in the opinion of the physician, constitute a special medical risk.

In addition, the dosage of vaccine recommended for children by Dr. E. C. Curnen, Chairman of the Committee on Control of Infectious Diseases, American Academy of Pediatrics, at the recent meeting of the Public Health Service and the State and Territorial Health Officers Association in Washington, was adopted for recommendation to the physicians of Virginia.

For pre-school children (3 months to 5 years)—0.1 cc. intracutaneously or subcutaneously, repeated after an interval of one to two weeks.

For children 5 to 12 years of age—0.5 cc subcutaneously, repeated after an interval of one to two weeks.

For children 13 years of age and older—the dose for adults, 1.0 cc subcutaneously in a single dose, may be used.

This committee also appointed a Joint Committee of The Medical Society of Virginia and the State Department of Health on publicity and information, to review available information on the Asian influenza situation and to keep the component societies adequately informed.

Influenza is a virus disease and is, therefore, relatively unpredictable. It cannot be said where or when it will appear. From the point of view of the individual there is little cause for undue anxiety or special concern. Should an epidemic develop, the approximately 20 per cent of the people who contract Asian influenza would be stricken with a relatively mild illness with symptoms no more severe than those produced by the types of influenza prevailing in the past few years. The disease is disabling for only about a week, but if it should affect even 10 per cent of the population of a community at one time, it could be disabling from the standpoint of maintenance of community services and it would present a problem in providing care for the usual number of sick persons plus those who have influenza. If the disease should be concentrated among persons in industrial occupations, it could be economically crippling.

The only protection against the disease is through use of the vaccine. Both the State Department of Health and The Medical Society of Virginia recommend that the people of Virginia be inoculated as rapidly as the vaccine becomes available. The manufacturers of the vaccine have already done a splendid job of production. The virus was given to the six companies licensed to produce influenza vaccine on May 22 of this year and on August 12 they had vaccine on the market and are well ahead of their anticipated schedule. These companies are distributing the vaccine to the states on an equitable basis according to each state's proportion of the total population of the United States. The voluntary allocation program applies to future civilian use and

not to vaccine already shipped to fill military and civilian orders. Virginia's proportion of the vaccine is 2.1 per cent.

There will be many false alarms in identifying an epidemic. The virus has been seeded in every state, and there have been epidemics in parts of a few states. It must not be forgotten that at this season colds and influenza are normally present. Laboratory studies alone can identify the type of virus causing an outbreak. These laboratory studies are of no value to the patient in the treatment of his illness because they are not completed until after his recovery. They are important in diagnosing an epidemic and only about 12 to 24 specimens would be needed. There is only one public health virus laboratory in the State which has been set up to diagnose Asian influenza and it is a part of the Laboratory of the State Department of Health, located in the State Office Building, Richmond. Because this laboratory has a very limited staff trained in viral studies, because equipment and space are limited, and because reagents are scarce and expensive, the Laboratory will examine only those specimens that are sent in through the health directors. For these reasons a practicing physician should arrange through the health director of his area before collecting and forwarding specimens to the Laboratory for examination for Asian influenza.

Physicians should report cases of influenza and pneumonia to the health departments by name, address, age, sex, and color. In cases of pneumonia, sputum specimens should be collected for identification of the type of bacteria causing the pneumonia and for sensitivity to antibiotics. This should be done before antibiotics or sulfonamides are given. In observations, it is important to identify pneumonias in order that any change in virulence during the course of an epidemic may be noted.

The functions of the State Department of Health in connection with a possible impending epidemic are:

(1) To disseminate health education and to serve as an information center.

(2) To collect morbidity, mortality, and complications records and to report the same to the National Office of Vital Statistics and to the medical societies of Virginia.

(3) To advise, assist, and cooperate with the medical societies of Virginia.

(4) To advise, assist, and cooperate with local medical groups.

(5) To provide laboratory facilities for the diagnosis of the epidemic.

(6) To provide epidemiologic consultation where needed.

Monthly Report of Bureau of Communicable Disease Control

	Sept. 1957	Sept. 1956	Jan.-Sept. 1957	Jan.-Sept. 1956
Brucellosis	1	8	19	24
Diphtheria	2	1	14	24
Hepatitis	31	41	359	379
Measles	69	74	4788	23525
Meningococcal Infections	3	4	55	63
Meningitis (Other)	50	28	373	116
Poliomyelitis	24	82	75	174
Rabies (In Animals)	19	18	255	246
Rocky Mt. Spotted Fever	1	9	29	47
Streptococcal Infections	222	506	5097	4675
Tularemia	2	1	25	18
Typhoid Fever	0	12	35	47

Book Announcements . . . .

Books received for review are promptly acknowledged in this column. In most cases, reviews will be published shortly after the acknowledgement of receipt. However, we assume no obligation in return for the courtesy of those sending us same.

Battle For The Mind. By WILLIAM SARGANT, M.D., London, England. Doubleday & Company, Garden City, New York. 1957. 263 pages. With illustrations. Cloth. Price $4.50.

This book is an attempt to find a generalization valid to the effects of reindoctrination of human attitudes, beliefs and vital motivations by men in the diverse fields and purposes of medicine (psychiatry), politics, religion and primitive superstitions.

The orbit around which the author's conclusions revolve was described by Pavlov in his conditioned reflex experiments on dogs. Full credit is given to this Pavlovian influence with its "mechanistic and physiologic approach". Sargant concludes that while "men are not dogs", they can be classified according to their "response to imposed stress or conflict situation" into Pavlov's four basic temperamental types.

Sargant indicates that behavior and attitudes are the product of conditioned reflex patterns which are gradually established in an individual, and that conversion involves causing the sudden disruption of these patterns. This is accomplished by actively inducing states of distress, fear, fatigue, weakness and confusion. The various techniques to do this are described.

The author convincingly presents the similarity between the techniques for inducing these states of unrest and final functional disorganization, breakdown or reversal as found in the brainwashing of political prisoners, in conversion of the unsaved by preachers using fear provoking sermons, in psychiatric reorientation and in tribal rites of initiation of primitive societies. He emphasized the various responses to these stresses between individuals of the four basic temperamental types, adding that certain individuals are "peculiarly resistant to them."

Comparisons of the motives and purposes of the various disciplines are avoided, while techniques are extensively compared. For example, Wesley's method of preventing backsliding by following his sermons with class meetings is compared with Communist solidifying gains by the use of small cells where authoritarian party doctrine can be continually reinforced.

The author maintains the materialistic concept of altered brain function as the basis for explaining these phenomena but does not present physiologic data to substantiate his position.

The reader who thinks dualistically of mind and brain may be disturbed by statements that in some patients, barbiturates "relax their brain" (p. 68), and that reason, religion and social apprehensions are "physiologically entailed to the brain" (p. 239). Continuing in this vein, the author explains the benefit of electroshock convulsions as due to temporary exhaustion and inhibition, i.e., to altered brain physiology which he contends happens similarly in severe emotional exhaustion.

The timeliness of this work lies in the relating through similar indoctrination techniques of the two opposing great ideological forces of Communism and Christianity. For this reason, if for no other, the book should attract wide attention.

The author states: "Man cannot and should not try to exist without some form of religion, but let us add that although it is quite possible to indoctrinate people with ideas based on an out-of-date economic or historical tradition, or even on deliberate lies, and keep them fixed in these beliefs, a nation's health and efficiency depend on a close relation between social practice and religious belief."

The author acknowledges that further study is needed concerning individual and group reactions to these stresses. Search is indicated to find means to protect the innocent from abuse and to intensify causes dedicated to the dignity of man.

This book will interest analytical persons of many walks of life who are atuned to current intellectual problems. The work betrays the author as a serious student of man despite his preoccupation with certain bodily elements.

GEORGE E. ARRINGTON, JR., M.D.

Current Currents

SIX NATIONWIDE RADIO CHANNELS for emergency use of physicians have been recommended to the Federal Communications Commission by the American Medical Association. The AMA also endorsed the use of several channels for non-commercial FM educational broadcast stations. The proposed channels would all be in the vicinity of 161 megacycles in the radio spectrum.

According to the AMA, ". . . the use of numerous remote pickup broadcast stations in conjunction with non-commercial FM broadcast stations represents an effective method of developing the potential of educational programs. To make full utilization of remote pickup broadcast stations as an integral part of broadcast programs, it is essential that clear channels be reserved for these . . . stations."

The American Hospital Association has also requested separate frequencies for hospitals and hospital associations. It cited needs for more effective communication with ambulances and automobiles of staff physicians and surgeons, as well as for use in time of disaster.

PHYSICIANS are being urged to renew their efforts in connection with the nationwide drive for polio immunization. Secretary Folsom of the Department of Health, Education and Welfare has reported that the incidence of paralytic polio has decreased a spectacular 80%, due largely to the use of vaccine. He states that 1,578 paralytic cases have been reported thus far this year in contrast with 7,886 for the comparable period two years ago, and 5,241 last year. Total cases (non-paralytic included) also have decreased, from an average of 24,928 over the past five years to 4,851 this year.

Secretary Folsom states that this is the best time for medical societies and individual physicians to make sure that everyone who needs protection gets it. He noted that more than 37,000,000 Americans under 40 have received no vaccine, and 44,000,000 have had only one or two doses.

THE AMERICAN MEDICAL RESEARCH FOUNDATION was recently established by the AMA. Principle purposes of the Foundation will be: (1) to promote the betterment of public health through scientific and medical research; (2) to plan and initiate scientific and medical research, and (3) to collect, correlate, evaluate and disseminate results of scientific and medical research activities to the general public. Voting members of the Foundation will be AMA trustees. Meetings will be held annually at the time of the AMA Annual Sessions.

THE WORLD MEDICAL ASSOCIATION is a confederation of 53 national medical associations, representing 700,000 physicians around the world.

CONTRIBUTE NOW TO A.M.E.F.

A DRAMATIC EDUCATIONAL FILM on cancer has recently been added to the AMA Film Library. Entitled "The Other City", the film stresses the encouraging fact that doctors currently are saving one-in-three patients as compared with a previous one-in-four ratio. The setting of the film is Racine, Wisconsin, and the following four basic thoughts are developed: (1) Racine empty and lifeless; (2) a symbolic representation of what cancer is; (3) how the 75,000 inhabitants of this token city could have helped save themselves, and (4) Racine alive and bustling.

Produced by the American Cancer Society, this 16 mm color film is suitable for showings on local television, church, club and school gatherings. Medical societies may book the film through the AMA Film Library or through the State Office of The Medical Society of Virginia.

MORE THAN 30,000 PHYSICIANS last year took graduate training either as an intern or resident. There were 9,893 graduates serving internships in 1956-57, an increase of 290 over 1955-56. There were 23,012 serving residencies, an increase of 1,587 over the preceding year. This training was offered by 1,372 approved hospitals.

The percentage of available internship and residency positions filled in 1956-57 remain the same as that of 1955-56. Respectively they were 83 and 81 per cent filled.

During the past ten years, there has been an increase of 6 per cent in the number of approved hospitals and an increase of 31 per cent in the number of internships offered. The number of interns per hospital has increased from 11.3 ten years ago to 13.9 in 1956-57.

THE OFFICE OF VOCATIONAL REHABILITATION reports that the number of persons restored to useful work during the fiscal year ending July 1 reached a record high of 71,570. Another 145,000 disabled persons were receiving rehabilitation services at the end of the fiscal year, and most of these are expected eventually to be restored to productive work. It is estimated that those rehabilitated during the twelve months will increase their earnings the first year on the job from $18.9 million to $127.6 million.

FROM ALL INDICATIONS, VA patient loads are relatively stable at present. It seems likely, however, that Congress will soon have to decide whether this load is to remain stable. Several state veterans' groups have been pressing for new VA hospitals in their areas even though there are no service-connected cases on the VA waiting list anywhere in the United States.

THE LINES ARE BEING DRAWN and signs point to a busy time in the health field during the second session of Congress. The Chairman of the House Appropriations Sub-Committee on HEW Budget has placed federal construction aid to medical schools high on the list of bills due for action. However, he made no mention of the labor backed bill for free hospitalization for the aged under Social Security.

Woman's Auxiliary....

Biographical Sketch

Louise Waller St. George, the wife of Dr. John Randolph St. George, is from Portsmouth, Virginia. She was born in Weldon, North Carolina, but has spent most of her life in Portsmouth. She is the daughter of Mrs. Ethel Day Waller, who is widely known in the field of Nursing Education in Virginia. Her father died when she was a very young child. It was after his death that her mother entered the Graduate School of Nursing of the University of Pennsylvania, in Philadelphia. After three years separation, Mrs. St. George and her only sister were reunited with their mother in Portsmouth. After a few years of public health nursing her mother entered the field of hospital administration and nursing education. Because of her mother's career, Mrs. St. George's girlhood was spent in the atmosphere of hospitals and the medical profession.

She attended Westhampton College and sang in the Glee Club. She studied voice under Mr. and Mrs. Edwin Feller, in Norfolk. Mrs. St. George attended business school after leaving college. She became secretary to four doctors, met and married Dr. St. George when he returned to Portsmouth to practice.

Dr. St. George attended William & Mary College and graduated from the Medical College of Virginia. He interned and was resident in surgery at the Hospital of St. Vincent de Paul, in Norfolk. He does general practice and surgery and is active in the Virginia Academy of General Practice. Mrs. St. George was historian for the auxiliary to this organization last year.

Dr. and Mrs. St. George have one son, John Randolph St. George, Jr., who graduated from the Virginia Military Institute last June with a Bachelor of Arts Degree in Biology, studied this past summer at the Mountain Lake Biological Laboratory of the University of Virginia, and is continuing his graduate studies in Biology this year at the Virginia Polytechnic Institute.

Mrs. St. George is a member of the Woman's Auxiliary to the Norfolk County Medical Society. She is a former president and has served on the board in various capacities for a number of years. She is also a member of the Auxiliary to the Portsmouth Academy of Medicine, which organized on September sixth of this year.



Mrs. John Randolph St. George
President, Woman's Auxiliary

On the board of the Woman's Auxiliary to The Medical Society of Virginia Mrs. St. George has been Finance Chairman, Revisions Chairman, Chairman of Organization and Membership, Third Vice-President and President-elect.

Dr. and Mrs. St. George are active members of St. John's Episcopal Church, in Portsmouth. Dr. St. George is on the staff of both hospitals there, and Mrs. St. George is a member of the Auxiliary to the Maryview Hospital and the Portsmouth General Hospital. She was a former president of the Auxiliary to the King's Daughters' Hospital, which is now the Portsmouth General. She has served on the board of this auxiliary for a number of years. It is in this hospital that her mother is still actively engaged in directing a school of nursing and nursing services.

Although her life, as far back as she can remember, has been spent in the association of the sick and those who administer to them, Mrs. St. George has many other associations and hobbies. She is a member of the Elizabeth River Garden Club, the

Portsmouth Woman's Club, the Norfolk Museum of Arts; supports the Community Concerts and the Little Theater. She loves opera and the symphony; enjoys choir work. Gardening is a hobby which she shares with her husband. She does some flower arranging, stencilling and tray painting, but does not claim proficiency in these. She is constantly seeking new outlets for her energies, but tries to take them one at a time, in order to do each job well and give of herself whole-heartedly.

All Fevers Aren't Flu

The American Medical Association's special committee on influenza warned against attributing all flu-like symptoms to Asian influenza. In its first comprehensive report to physicians on Asian influenza, the committee quoted an Army physician as saying, "All that fevers is not flu." When a disease is widespread, there is a tendency to attribute the symptoms of most patients to the new disease. Physicians particularly must be aware of this fact.

Only by isolating the causative virus from throat swabs of ill patients can a definite diagnosis of Asian flu be made.

In the report in the September 28 A.M.A. Journal, the committee listed eight main conclusions about the disease and summarized the situation as it now stands. An accompanying editorial pointed out that "any change in the incidence of reported cases, or in the virulence of the virus, might warrant a completely new approach toward the disease."

As of now, the committee has reached these conclusions:

—The probability of an epidemic of Asian influenza this fall or winter is great.

—The United States population has no natural immunity to this type of influenza.

—The most satisfactory vaccine possible has been developed.

—The supply of this vaccine should soon be adequate to protect essential national services.

—The vaccine is safe, except in patients with known allergy to eggs.

—The course of the disease is moderate in most patients, and there have been very few deaths reported due to the disease.

—It is possible, but not probable, that the disease will increase in virulence.

—Antibiotic and sulfonamide drugs are not effective in uncomplicated influenza cases. If secondary bacterial infection occurs as a complication, adequate treatment with these drugs should lessen the seriousness of the infections.

The committee pointed out that vaccine is now available in limited quantities. Much more will become available during the next few months, but until then physicians will have to decide how best to conserve the supply of vaccine. Two methods of injection have been suggested. One calls for one cubic centimeter to be injected subcutaneously (under the skin). The other calls for one-tenth of a cubic centimeter to be injected intradermally (between the layers of the skin).

Until further information about the effectiveness of these two methods is available, the physician will have to decide for himself how the vaccine should be given to his patients.

The symptoms of Asian influenza consist of chills that occur with very little warning and temperature that climbs to 103 or 104 F and remains in that range for three to four days. The fever is accompanied by headache and general muscle pains. As the fever subsides and the aches and pains gradually vanish, the patient is generally left weak.

There is actually no specific treatment. Naturally the healthy person with good habits of eating and sleeping "stands the best chance in a bout of any infectious disease," the report said. Once Asian flu strikes, bed rest and fluids are necessary. Hospitalization should be limited to patients who develop complications or to those with other diseases which might be aggravated by influenza.

All patients should be isolated insofar as it is convenient and every patient should be protected from sources of bacterial infections. During the acute stage of influenza, the patient should not be allowed to have visitors, the report concluded.

The special report was prepared by a subcommittee consisting of Drs. Cortez F. Enloe, Jr., New York, Max L. Lichter, Detroit, and David Henry Poer, Atlanta, Georgia, in consultation with the surgeon general of the U.S. Public Health Service.

Editorial....

Harry Clark Bates, Jr.

THE NEWS that Harry Clark Bates, Jr., M.D., had been named President-Elect of The Medical Society of Virginia created a great deal of excitement in our medical community of Northern Virginia. For the first time in the over one hundred year history of The Medical Society of Virginia its president was to come from the area of the Tenth District.



HARRY CLARK BATES, JR., M.D.
President, The Medical Society of Virginia

The October, 1956, issue of the Medical Bulletin was already in press. However, this news could not wait. We literally stopped the presses! We changed our lead story to have the headline "Bates President-Elect of State Society". We ripped out the cartoon on our editorial page and in its place ran the words "Congratulations Harry!" The story also made the front page of our local newspaper, The Northern Virginia Sun, and was carried in the Washington papers. To us this was an historic event.

This news brought happiness to every single member of our medical community—physicians, wives, nurses, technicians, secretaries and allied personnel. Here is an individual who truly has 100% backing of the "home folk".

What kind of person is this and why does he have such a following? Let us first review the high-lights of his life to date and then obtain an expression of opinions from his physician colleagues.

Harry Clark Bates, Jr., was born October 19, 1917, in Brentwood, Maryland. Three

years later he moved to Arlington, Virginia. His parents, whose guidance, encouragement and help have been and continue to be invaluable to Harry, still reside at the family home at 4761-24th Road, North, Arlington.

Dr. Bates attended elementary and high schools in Arlington County and Washington, D. C. In the fall of 1935, he entered the University of Virginia, graduating in 1939, with a B. S. degree.

The following fall, Harry entered George Washington University Medical School. The Medical School program was accelerated due to World War II and he received his M.D. degree in February, 1943. While in Medical School, he was a member of Phi Chi Medical Fraternity, the William Beaumont Medical Society and the A.F.A. King Obstetrical Society.

Dr. Bates served as intern and resident physician at George Washington University Hospital until October, 1944. At this time, he was called to active duty with the United States Army Medical Corps. He was discharged as a captain in 1946. Following his discharge, he continued his medical studies by serving as a resident in internal medicine in the Mount Alto Veterans Hospital for a period of two years. After completion of his residency, Dr. Bates opened his office for the private practice of medicine in Arlington in 1948. Here he has won the respect of his many patients not only by his medical knowledge but by his sympathetic, humanistic approach to their problems.

Harry is a devoted family man. He married the lovely and petit Venita L. Robbie of Arlington in June, 1943. Harry and Venita had been sweethearts since high school days. They have three wonderful children. Clark, age 11, be-bop fan, president of the 6th grade, loves sports, particularly baseball. Jacqueline, age 8, a Bluebird in the Campfire Girls, plays the piano. Robert, age 1, bright-eyed, specialist in background music, delights in his toy mailbox.

Harry's most pleasurable moments are spent with his family. He enjoys his hobby of electrical trains and likes to work with his hands such as in the garden or in creating things for his children in his workshop. The family are members of St. Mary's Episcopal Church in Arlington.

In addition to his devotion to his profession and to his family, there is another important aspect to Dr. Bates' personality. He is an individual who believes in his community and works for its betterment. He has been a member of the Arlington Kiwanis Club for 8 years, and a member of the Board of Directors for three years; member of the Board of Directors of the Arlington Red Cross; member of the Board of the Northern Virginia Heart Association; member of the Board of Trustees of the Arlington Community Chest and Council; member of the Arlington Hospitalization Fund Board and served as chairman in 1955. He is a Clinical Instructor in Medicine in the George Washington University Medical School, having held this position for the past nine years.

Harry has been a member of the Arlington County Medical Society since 1948, secretary in 1951 and president in 1955. In addition he has served on several committees for the Society.

Dr. Bates has been a member of The Medical Society of Virginia since 1948. He has served on numerous committees. He was chairman of the Public Relations Committee in 1955, 1956, and 10th District Councilor 1952, 1955, and 1956.

His other affiliations include the Virginia Academy of General Practice; member, AMA; associate member, Medical Society of the District of Columbia; member, World Medical Association.

Harry is keenly interested in good public relations for the medical profession. In

all his endeavors, he has taught and practiced the principle of desired public relations.

Now that we have reviewed his life to date, let us see what three of his medical colleagues have to say about him.

W. C. Welburn, M.D.:

"At a caucus of delegates from the 10th District it was agreed that Arlington County should name a candidate for the Council.

"We selected Harry Clark Bates and we 'builded better than we knew.'

"He had previously shown great interest in the problems confronting the State Medical Society and as councilor he gave freely of his time and money to further its interests. His judgment and advice were so appreciated that he was early marked for advancement. All we had to do was give him a start and he made the grade under his own power.

"Thanks to Harry Bates, Arlington County Medical Society has at last found its place in the sun."

J. R. B. Hutchinson, M.D.:

"Harry Clark Bates, who had been elected to the Presidency of The Medical Society of Virginia, is a man most worthy of this honor. He is a person respected and held in the highest esteem by the profession as well as the laymen of his community. His associates, I am sure, recognize that he has the ability, interest and willingness to assume the responsibilities which are necessary for real leadership and, at the same time, maintain his genial and pleasant personality.

"Our late Dr. Fisher of Staunton, Virginia, Chairman of the Nominating Committee which considered the nomination of Dr. Bates, stated that he had observed this physician for a considerable period of time and felt that he had the characteristics and innate ability to become one of the leading Presidents of the State Medical Society as well as probably being one of the youngest.

"We of the Tenth District are proud and deeply appreciative of the recognition and honor which have been bestowed upon Dr. Bates by our State Medical Society and wish for him every success in the coming year."

Lloyd B. Burk, Jr., M.D.:

"Many men fail to achieve maturity in a full life span—for maturity is more than an aging process. While there are numerous men of later years who may be classified as mature, a young man who "comes of age" is outstanding. Arlington has found such a person in the individual of Harry Clark Bates; and The Medical Society of Virginia also discovered his unusual talents and has made him its President. We are indeed delighted.

"I cannot think of a greater achievement in a man's life than the attainment of maturity. There are so many elements which are productive of this end result. I believe it is a goal before many of us and the example is worth reviewing.

"First of all Harry is a religious man—his faith in God is firm. He and his family are active in their Church. And, as an individual and physician he seeks God's guidance and help.

"Harry is a devoted husband and father. In spite of a busy practice and his many extracurricular activities he sets aside time—not enough according to him—for his family.

"He is a physician of the highest calibre. He cares for his patients with high intelligence and genuine compassion. On difficult problems he seeks counsel with other physicians and these occasions are additive to his stature.

"His conduct in the administrative phase of hospital staff, medical societies and community affairs is a singular achievement. He deals with each problem thoroughly and with dispatch. He has self confidence without egotism—enthusiasm for others

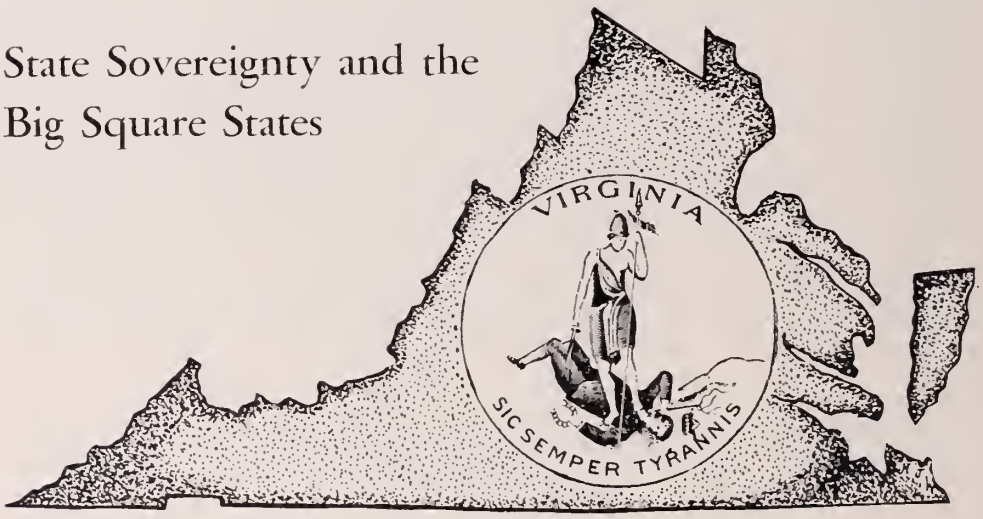
and humility for his own attainments. His evaluation of controversy is without bias and with disciplined emotions. He presents dignity without pompousness. He has an inherent ability to differentiate right from wrong—and stand firm in his beliefs regardless of political favor.

"Harry Clark Bates of Virginia is a leader and will always have the confidence of the men he serves."

In summary, the medical community of Northern Virginia, and particularly Arlington County, has indeed been honored that one of its members, Harry Clark Bates, Jr., M.D., is to serve as president of The Medical Society of Virginia. He is one of the youngest men ever elected to the presidency of the Society, but he is most capable of handling the job.

A. V. Rigsbee, M.D.

State Sovereignty and the Big Square States



THIS ISSUE of the Virginia Medical Monthly marks the second anniversary of the appointment of the present Editorial Board. The indulgence of the reader is requested to permit your Editor, on this occasion, to digress from the usual medical topics and discuss a matter which should be of interest to all of us but which is without medical significance. The thoughts expressed are those of the writer and are not necessarily shared by other members of The Medical Society of Virginia.

For the past two months we have heard much about Little Rock and states' rights and this brings home to us anew the degree to which state sovereignty has been lost during recent years. States' rights is a meanful, tangible thing to Virginians but as one goes north or west the phrase appears to have neither interest nor meaning for the average citizen. Why does a matter of such import to us mean so little to so many Americans?

One needs only to look at a map of the United States to find an answer. The states north of the Ohio River and west of the Mississippi are generally large and square or rectangular in shape. This means that they were cut out of public lands. In the west, this land belonged to the federal government while north of the Ohio it formerly

was part of the State of Virginia. Where the line fell meant little in these vast wind-swept spaces.

At the time this federal land was partitioned the inhabitants thought primarily in terms of the national government and only secondarily, if at all, in terms of their newly-created state. This pattern of thought has carried on to the present day. Attorney General Brownell is a product of Nebraska and President Eisenhower spent his formative years in adjoining Kansas. The federal government existed before these states were formed and the states served only as political subdivisions with much the same relationship to the national government as our Virginia counties have to our Commonwealth. The transition from territorial to state status was accomplished easily for actually little change took place.

More than fifty per cent of the area of a number of the western states continues as public land and over eighty-seven per cent of Nevada still belongs to the United States. What can states' rights mean to a state which controls only one-seventh of the land within its boundaries?

A corollary to these observations is the significance of the long straight boundaries between the Western States. A straight line between two states means that at the time the boundary was established there was little or no difference between the people who lived on either side and it was a matter of indifference to them as to which state they ultimately were assigned. The straight boundary between Virginia and North Carolina is an example of this.

On the other hand, barring natural barriers, as rivers or mountain ranges, an irregular line between two states means that dissimilar people lived across the line from each other and it was a matter of vital concern as to which side they found themselves on. The boundary between Virginia and West Virginia, which was created during the Confederate War, is a good illustration of this. The only straight line along this tortured boundary is a short section between Berkeley and Jefferson Counties in West Virginia and Frederick and Clarke Counties in Virginia. The reason for this is not hard to arrive at. Berkeley and Jefferson Counties chose to remain in Virginia but were removed by force from the Commonwealth and given to West Virginia because the tracks of the Baltimore and Ohio Railroad passed through them and the North did not want this railway on Virginia soil.

Statehood and the rights and privileges inherent in a sovereign state mean little to these rectangular Johnnies-come-lately. These recent arrivals contributed nothing when they entered the union but gained much in political patronage and federal handouts. Where all comes free nothing is of value. Virginia, on the other hand, gave up a quarter million square miles of territory and 175 years of relatively independent existence. Before Virginia ratified the Constitution, Patrick Henry and like-minded Virginians saw to it that the Bill of Rights would spell in simple language the broad rights of the sovereign states. Once our signature was obtained these written promises have proved as ephemeral as President Eisenhower's verbal assurances that armed forces would not be used to enforce integration.

But what of the New Englanders who also ratified the Constitution and should have been equally zealous in maintaining the sovereignty of their own states? Such has not been the case. An explanation in part may be found in the many first and second generations of foreign born who came to a strange land and "knew not Joseph," but this is not the entire answer. The unanswered part of this question is part and parcel of the much larger question as to what makes Yankees behave as they do. The answer to this must await another editorial and another author—possibly a psychiatrist.

H.J.W.

News....

New Members.

Since the list published in the October issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Samuel Webster Adams, Jr., M.D., Martinsville
George Emory Cain, M.D., Dante
William Belfield Cave, M.D., Madison
Kurt Johannes Fox, M.D., Culpeper
James Eugene Grimes, M.D., Fredericksburg
Michael John Keith, M.D., Norfolk
James Bunting Kenley, M.D., Louisa
Herbert Edward Lane, Jr., M.D., Falls Church
William Michael Lordi, M.D., Richmond
Irwin H. McNeely, M.D., Franklin
Charles Loren Ransom, M.D., Danville
Joseph Walter Siewick, M.D., Falls Church
Walter Paul Wise, M.D., Manassas

Annual McGuire Lecture.

The 29th Annual McGuire Lectures Series of the Medical College of Virginia will be held on November 13-15. Dr. Francis D. Moore, Moseley Professor of Surgery, Harvard Medical School, will be guest lecturer. He will speak on Electrolyte Disorders Characteristic of the Surgical Patient on the 13th and on Protein Starvation and the Wound on the 14th.

A Symposium on Endocrinology and Metabolism in Surgery will be held on the 14th and 15th. Subjects for discussion on the 14th are: The Regulation of Endocrine Secretion Following Operative Trauma by Dr. David M. Hume, Medical College of Virginia; Urinary Catechol Amines by Dr. McChesney Goodall, Duke University; Epinephrine Secretion in the Adrenal Venous Blood by Dr. Hume; Blood Catechol Amines by Dr. Moore; Ammonia Metabolism in Liver Disease by Dr. Stuart Ragland, Jr., Medical College of Virginia; Ammonia Metabolism in Shock by Dr. J. Shelton Horsley, III, Peter Bent Brigham Hospital; Normal Aldosterone Secretion by Dr. Frederic C. Bartter, National Heart Institute; and Aldosterone Secretion in Response to Trauma by Dr. Bernard Zimmermann, University of Minnesota. On the 15th, subjects will be: The Anti-Diuretic Hormone by Dr. Bartter; Sodium and Potassium Metabolism by Dr. Zimmermann; Functioning Carcinoid by Dr. William Parson, University of Virginia, and Dr. Albert Sjoerdsma, National Heart Institute; Management of Acute Renal Failure by Dr. Allan M. Unger, Medical College of Virginia; Electrolyte Problems in Pediatric Surgery by Dr. Arnold M. Salzberg, Medical College of Virginia; The Diagnosis of Adrenal Tumors by Dr. Parson; and Surgery of the Adrenal Gland by Dr. Hume.

All lectures will be held in the Baruch Auditorium of the Egyptian Building, Medical College of Virginia. There is no charge for the McGuire Lectures themselves; there will be a charge of $5.00 a day for the lectures given during the days of the 14th and 15th, except to members of the faculty of the Medical College of Virginia, the Medical Department of the University of Virginia, the physicians of the McGuire VA Hospital, medical students, and members of the house staff of any hospital.

Dr. Garcin Honored.

Dr. Ramon D. Garcin, Richmond, was honored on his 90th birthday at a dinner given by the Board of Directors of the State Planters Bank of Commerce and Trusts. He was presented with a mounted scroll of commendation. Dr. Garcin has been a director of the bank since 1912 and has attended 526 of the 550 scheduled meetings.

New Medical Journal.

The American Rheumatism announces the forthcoming publication of "Arthritis and Rheumatism" which is to be their official journal. The new journal will appear bimonthly starting with the January-February 1958 issue. Dr. William S. Clark has been named editor.

The journal will cover the field of connective tissue disorders, in particular rheumatoid arthritis, osteoarthritis, rheumatic fever, gout, the so-called collagen diseases, and nonarticular rheumatism.

Dr. White Receives Award.

Dr. Forrest P. White, Norfolk, will receive $700 as one of the nine winners in the second annual Ted V. Rodgers awards for articles on highway improvement. He was the only non-journalist to receive the honor in the contest sponsored by Trailmobile, Inc.

Clinic Is Opened.

The Dickenson Clinic at Clintwood, Dickenson County's newest medical facility, officially opened its doors the first week in September. This is one of the most modern clinics in this section of the state.

It has four consultation rooms, an emergency room, business office and reception room, and complete laboratory and x-ray equipment.

Named to Hospital Board.

Four area physicians have been elected to the Board of Directors of the Northern Virginia Doctors Hospital Corporation. They are Dr. H. Clark Bates, Arlington; Dr. Lloyd Burke, Arlington; Dr. Christopher Murphy, Alexandria; and Dr. Thomas O'Brien, Falls Church.

Dr. Isadore S. Zfass,

Richmond, participated in a symposium on "Sleep Electroencephalography" at the Eleventh Annual Meeting of the American Electroencephalographic Society, held at Bishop's Lodge, Santa Fe, New Mexico, October 3-6. Dr. Zfass is a Councillor of the Society, Chairman of the Committee on Public and Legal Relations, and a member of the Committee for the Certification of Technicians.

Southwestern Virginia Medical Society.

At the annual meeting of this Society, held in Roanoke, September 12th, Dr. Reverdy H. Jones, Jr., Roanoke, was named president, succeeding Dr. J. T. Showalter, Christiansburg. Dr. Glenn Cox, Hillsville, was elected vice-president, and Dr. William S. Credle, Bristol, secretary-treasurer. New board members are Dr. M. A. Johnson, Roanoke, and Dr. R. H. Grubbs, Christiansburg.

Upjohn Company's Grand Rounds #6.

Another timely contribution to the busy physician's post-graduate education, and a subject of deep current interest is to be presented in the next Grand Rounds, the live, closed circuit medical telecast, sponsored by the Upjohn Company.

The hour and a half program is entitled "Two Key Questions in Coronary Disease—1. What is the Place and Value of Surgery, and 2. What is the Role of Dietary Fats?" The program will start promptly at 9:00 P.M., E.S.T., on Wednesday, November 13th, at the Jefferson Hotel in Richmond.

There will be plenty of seats for all and a telephone nearby where you may be reached in an emergency. Consult your Upjohn representative for further details.

The panel for the evening will include: Dr. Paul Dudley White, Cambridge, Mass.; Dr. J. M. Morris, London, England; Dr. Charles P. Bailey, Philadelphia, Pa.; Dr. Ancel Keys, Minneapolis, Minn.; Dr. Clarence Lillehei, Minneapolis; Dr. Claude S. Beck, Cleveland; Dr. Donald B. Effler, Cleveland; Dr. William Dock, New York City; and Dr. E. H. Ahrens, Jr., New York City.

Richmond Surgical and Gynecological Society.

Dr. Randolph Hoge was recently elected president of the reactivated Society. Dr. Guy W. Horsley was elected vice-president and Dr. Benjamin W. Rawles, Jr., secretary-treasurer.

The society became inactive in 1920. Two members of the original group who rejoined are Drs. Frank S. Johns and Arthur S. Brinkley.

Dr. Paul D. Camp,

Richmond, has been appointed Governor for the State of Virginia in the American College of Cardiology.

Dr. Meade S. Brent,

Heathsville, has been made a Life Member of the Neuropsychiatric Society of Virginia, in recognition of his long association with the American Psychiatric Association and service to psychiatry.

Dr. Elam C. Toone,

Richmond, has been made vice-president of the Inter-Chapter Medical Advisory Committee of the National Arthritis and Rheumatism Foundation. He will succeed to the presidency next year.

Van Meter Prize Award

The American Goiter Association again offers the Van Meter Prize Award of $300.00 and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The award will be made at the annual meeting of the Association which will be held in the St. Francis Hotel, San Francisco, California, June 17, 18 and 19, 1958, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations, should not exceed 3,000 words in length and must be presented in English. Duplicate typewritten copies, double spaced, should be sent to the Secretary, Dr. John C. McClintock, 149½ Washington Avenue, Albany 10, New York, not later than February 1, 1958. The committee who will review the manuscripts is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for the presentation of the winning essay by the author if it is possible for him to attend.

Physician's Office

Available in shopping center in Newport News. Present tenant leaving to specialize. Reply to #225, c/o Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Virginia. (*Adv.*)

Wanted.

Mental Hospital physician. Merit increases. Vacation and sick leave with pay. Retirement benefits.

Chief of Service—Four years of psychiatric experience, at least two of which must have been in a mental hospital. State license or eligibility therefor. Starting salary $10,992.00 per year.

Staff Physician—Two years of psychiatric experience, at least one of which must have been in a mental hospital. State license or eligibility therefor. Starting salary $10,032.00 per year.

Apply to Superintendent, DeJarnette State Sanatorium, Staunton, Virginia. (*Adv.*)

Wanted.

Two full-time general practitioners or psychiatrists to work on psychiatric service of 2000-bed hospital in medical and cultural locality. Full-time salary range $6000-$10,320 (plus 25% for certification) with retirement, insurance, leave and other government benefits. Citizenship and license by some states required. Contact Manager, VA Hospital, Roanoke 17, Va. (*Adv.*)

Obituaries . . . .

Dr. Frank Albert Farmer,

Prominent and beloved physician of Roanoke, died October 9th. He was found dead in his office by a patient, death being due to a heart attack. Dr. Farmer was born in Halifax County in 1891 and graduated from the Medical College of Virginia in 1916. He had practiced in Roanoke since his graduation except for two years when he served as captain in the Army Medical Corps during World War I.

Dr. Farmer was a past president of the Roanoke Academy of Medicine and the Southwestern Virginia Medical Society. He was an organizer and charter member of the Virginia Academy of General Practice, had served on its board and was vice-president in 1956. Dr. Farmer joined The Medical Society of Virginia in 1920 and has served in numerous offices since that time. He has been a vice president and was a member of the Council at the time of his death, having served in this capacity for many years. He was a member of the Executive Committee of the Council and was chairman of the Insurance Committee.

His wife, a son and a daughter survive him.

Dr. James Oscar Mundy,

Charlottesville, died September 27th. He was 70 years of age and a graduate of the School of Medicine, University of Virginia, in 1912. Dr. Mundy has practiced for more than forty years in Charlottesville. He was on the staff at the Martha Jefferson Hospital.

Dr. Mundy had been a member of The Medical Society of Virginia for twenty-eight years. A daughter survives him.

Dr. Elliott Clarke Haley,

Front Royal, died September 13th after an extended illness. He was thirty-four years of age and a graduate of the University of Virginia Medical School in 1948. Dr. Haley began his medical practice in Front Royal in 1949. He has been a member of The Medical Society of Virginia since 1950.

His wife and two sons survive him.

Dr. Higgins

William Harrison Higgins, 1883-1957, a native of Kentucky, spent the productive years of his life in Richmond, where as citizen, internist, college professor, churchman and friend he left a lasting impression.

Born in Stanford, Kentucky, on October 13, 1883, he was the son of substantial, God-fearing, Presbyterian parents, and so was early made mindful of the value of education and the responsibility of service. After attending local schools he was graduated from Centre College with the A.B. degree in 1904, and the same year matriculated at the Johns Hopkins Medical School from which he was graduated in 1908. He took his internship at the Johns Hopkins Hospital and at Clifton Springs Sanitarium.

It was at the insistence of warm friends that he settled

in Richmond. Aligning himself with one of the South's foremost surgeons, J. Shelton Horsley, he began an enviable and rewarding career as one of the group of earnest young Lydgates who had been imbued early in the century in New York, Philadelphia and Baltimore with the Osler tradition "to observe, record and tabulate," —the group that began to replace the old bedside manner with the new bedside science. Happy it was for those who were to come after that these men never forgot medicine is an art as well as a science. They remained always students and lovers of its history. It is suggestive, however, of the importance they placed upon science that even then young Higgins insisted on Wassermanns for all patients entering the hospital for whose laboratory he was responsible,—no light determination since it entailed for him—at least in the beginning—a long ride on the street car to a farm in what is now Westhampton where there were sheep to be chased, and caught, and bled. No doubt his success in this strenuous undertaking was due to the summers he had spent, during college and medical school, playing semi-professional baseball. Those summers may also account for the trim, athletic figure and buoyant step that linger in one's visual memory of him.

Dr. Higgins early became a member of the teaching staff of the Medical College of Virginia, and attained in due time the rank of Clinical Professor of Medicine which he held until his resignation in 1954 at the age of seventy. He was a member of many medical societies—the Richmond Academy of Medicine (president 1930), The Medical Society of Virginia, the American Medical Association, the Southern Medical Association, the Johns Hopkins Medical and Surgical Association, the American College of Physicians, the American Clinical and Climatological Association, the Richmond Society of Internal Medicine. To their scientific publications he contributed some twenty or thirty papers.

Family and fireside were the center of his life. It was enriched by the talents and devotion of his wife, Elsie Herrick Lewis of Tappan, New York, whom he married in 1912; and by the interests and affection of four able and personable children: Dorothea E. (Mrs. R. A. Rankin); William H., Jr., whom he enjoyed launching into medicine; Elizabeth N. (Mrs. Wilson P. Todd); and Laurance H. To them and to a host of friends and acquaintances he seemed always a gentle person, characterized by a certain sweetness and gay grace. To his patients he embodied the soul of comfort and healing and strength. To his city he contributed uncounted hours of work with Red Cross, The Community Chest and as chairman of the Board of Health; and his support and advice were important in the beginnings of many institutions such as the new Richmond Memorial Hospital. His religion, as a layman in his denomination and as an elder for many years in Second Presbyterian Church, Richmond, as well as in his daily walk and conversation, was a matter of self-forgetful sincerity and continuing performance.

Harrison Higgins was a victim of progressive cardiovascular disease, and in the very last years of his life he had to cope with an ever-increasing invalidism. He died at his home in Richmond on June 8, 1957.

Wyndham B. Blanton, *Chairman*
H. J. Warthen, Jr.
Emanuel U. Wallerstein

Dr. Cutler

On the 6th of July 1957, the city of Newport News and the Newport News-Warwick Medical Society suffered the loss of one of their oldest friends when Dr. John C. Cutler died. Dr. Cutler was born in 1867 in Grand Rapids, Michigan, where he attended the local grammar and high schools and he spent one year in Chicago at the Garret Theological Seminary in preparation for the ministry. During this time he decided that he would rather spend his life in medicine so he transferred to Northwestern Medical School, where he graduated in 1899 with an M.D. degree. Dr. Cutler immediately went into general practice in the town of Vorona, Wisconsin, where he remained for several years and then moved to another somewhat larger town, Mt. Hored. After several attacks of pneumonia, Dr. Cutler felt that the rigors of the Wisconsin winters were too much for him and he moved to James City County in Virginia in 1913, where he began to practice medicine and also became a gentleman farmer. At the start of World War I, however, he thought that he would serve a more useful purpose elsewhere and moved to Newport News in 1917. He immediately became a member of the staff of the Elizabeth Buxton Hospital of which he remained a loyal member until the hospital was taken over by the Bernardine Sisters in 1952 and he continued on as a member of the staff.

Despite his advancing years, Dr. Cutler maintained his interest in his profession and in life in general. It was always a pleasure to have him speak to the Medical Staff and to the members of the Medical Society with his ready wit and kind remarks which invariably held a lesson for those who heard him. All of us felt a distinct loss when he announced his retirement in 1956 and we were all saddened by his death in July. Our sympathy is extended to his widow, Mrs. Jessie Cutler, and his children, and we suggest that a copy of this memorial be transmitted to his family and also be published in the Journal of The Medical Society of Virginia.

C. D. Bradley, M.D., *Chairman*
E. L. Alexander, M.D.
R. V. Buxton, M.D.

Dr. King

Dr. Marion Norwood King who had practiced General Medicine in Norfolk for 37 years, died September 8, 1957. A native of Warrenton, N. C., he was graduated from the School of Medicine of the University of Maryland in 1898. In 1902 he spent a year in post graduate study in Berlin and Vienna. He started his first practice in Texarkana, Arkansas, and in 1907 married Miss Melissa Payne, daughter of Dr. and Mrs. R. L. Payne of Norfolk. They returned east in 1909 and settled in Durham, N. C., where Dr. King's work was interrupted

by World War I. He volunteered in the Army and was made a battalion surgeon in the Medical Corps with the rank of Captain. For two years he was overseas, mostly in France. Upon his return he started practicing in Norfolk and became well known in the area. Failing health caused his retirement in 1949.

Dr. King was a member of First Presbyterian Church and served as an elder for many years. He was also a member of the Norfolk County Medical Society, The Medical Society of Virginia, and until his retirement, the Medical Societies of Arkansas and North Carolina and the American Medical Association.

Dr. King in his daily work was always gracious, kind and dignified, and his death leaves a host of friends and admirers who mourn his loss.

There was always the influence on his life of time spent on his father's farm in his early youth. He loved the country, he loved the soil, he loved nature. Fishing and hunting were his hobbies, and after his retirement, he spent many happy hours in Back Bay. In his latter years, not able to take any strenuous out-door exercise, he spent many happy hours with a few old retired cronies playing chess.

He was always a congenial colleague, a loyal friend, and all who knew him will miss him.

THEREFORE, BE IT RESOLVED, that we extend our deepest sympathy and love to the family of the late Dr. King in the great loss they have sustained, and we invoke the healing protection and guidance of Divine Providence upon them in their sorrow, and

BE IT FURTHER RESOLVED, that this resolution be recorded in the Minutes of the Society and copies be sent to members of the family and to the Virginia Medical Monthly.

WALTER P. ADAMS, M.D., *Chairman*
WILLIAM LETT HARRIS, M.D.
ALLIE D. MORGAN, M.D.

Dr. Finch

Almighty God, in His infinite wisdom, has seen fit to draw another from our midst. The members of the Richmond Academy of Medicine were saddened in May of this year by the untimely death of Frederick L. Finch while he was working in a civilian capacity as a medical officer with the U. S. Navy at Portsmouth. His death was sudden and unexpected and there was deep sorrow among his many friends and associates.

Fred Finch was born in Youngstown, Ohio, in 1905. After attending elementary schools in New York, he attended the College of William and Mary. He graduated from the Medical College of Virginia in 1932 and moved on to an internship at St. Luke's Hospital here in Richmond. After a year of general practice in Urbanna, Virginia, he opened an office in Richmond in 1934 in association with Doctor William H. Parker. He was named assistant industrial physician to the American Tobacco Company the same year and in 1946, after the retirement of Doctor Parker, was named physician in charge of the Virginia Division of the American Tobacco Company. He maintained this position as well as his own practice here until 1956 when he moved to San Francisco as a civilian medical officer at the Navy Ship yards. He subsequently was transferred to the Navy Shipyard at Portsmouth.

Doctor Finch joined the U. S. Navy in 1942 and was discharged in 1946 with the rank of Commander in the U.S.N.R. He was a member of many organizations and societies, but his chief interest was always in industrial medicine. He was in charge of all of the employees of the Virginia Division of the American Tobacco Company and was highly regarded by each of them as a friend, physician, and as a man they could depend upon to care for their injuries as well as illnesses.

His association with many of the members of this Academy was always on the highest plane, and to many of us, we feel a deep sense of personal loss in his passing.

Fred Finch is survived by his wife, Melba, and a daughter, Carole. The Richmond Academy of Medicine mourns with them the loss of their husband and father. We share with them the comforting remembrance of a richer life for having known and loved Fred Finch.

It is requested that this resolution be inserted into the minutes of the Academy, and that a copy of this resolution be sent to the widow of Frederick L. Finch, physician, friend and associate.

HERBERT C. LEE, M.D., *Chairman*
R. CAMPBELL MANSON, M.D.
R. D. BUTTERWORTH, M.D.

Dr. Jackson

Dr. Julian D. Jackson died at Norfolk Community Hospital on August 16, 1957, at sixty-seven years of age.

Dr. Jackson was born in Richmond, Virginia. After graduating from the public high school, he attended Union University, and then entered Howard University, Washington.

After graduating from Howard, he interned at Freedman's Hosiptal in Washington, D. C.

He came to Norfolk in 1919. Dr. Jackson was a staff member at Community Hospital and a member of the Norfolk County Medical Society.

He was much interested in the organization of the Maternity Home in Henry Street, which eventually merged with Community Hospital.

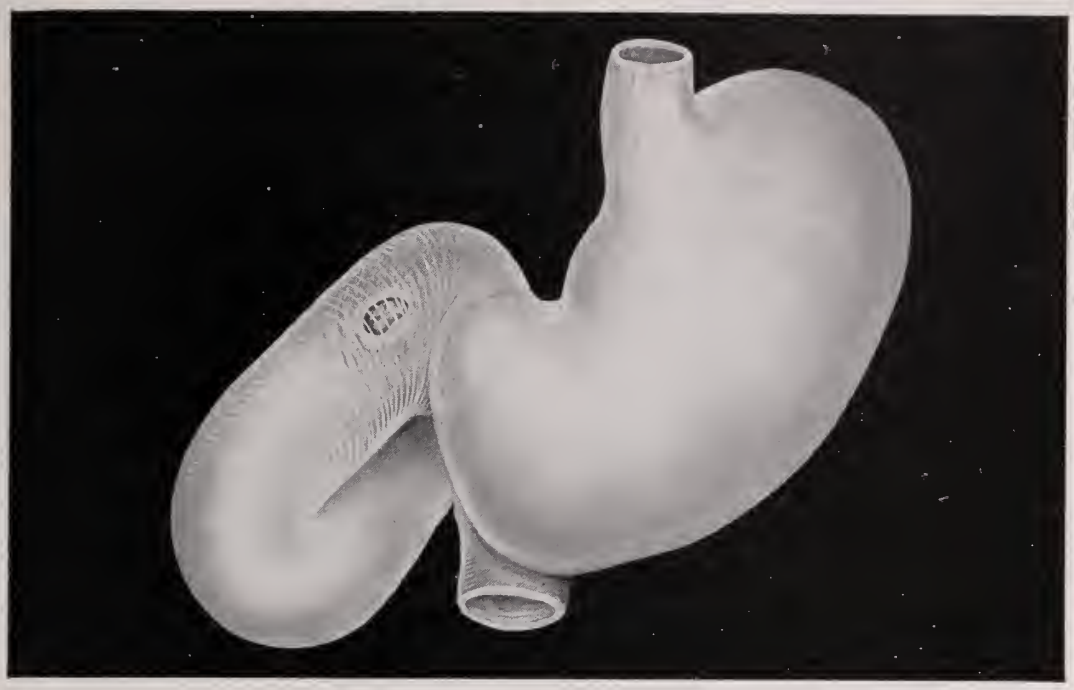
He was a devoted father and husband, and was much liked by his patients.

THEREFORE, BE IT RESOLVED, that Dr. Jackson will not only be missed by his family, but also by his patients and the medical profession, and

BE IT FURTHER RESOLVED, that a copy of this resolution be spread on the minutes of the Norfolk County Medical Society and a copy sent to the family.

C. L. HARRELL, *Chairman*
J. Q. A. WEBB
F. R. TRIGG

CONFIRMED THERAPEUTIC UTILITY



Pro-Banthīne® "proved almost invariably effective in the relief of ulcer pain,

*in depressing gastric secretory volume and in inhibiting gastrointestinal motility."**

"Our findings were documented by an intensive and personal observation of these patients over a 2-year period in private practice, and in two large hospital clinics with close supervision and satisfactory follow-up studies."*

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The average adult oral dosage of Pro-Banthīne is one tablet (15 mg.) with meals and two tablets at bedtime.

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*Lichstein, J.; Morehouse, M. G., and Osmon, K. L.: Pro-Banthīne in the Treatment of Peptic Ulcer. A Clinical Evaluation with Gastric Secretory, Motility and Gastroscopic Studies. Report of 60 Cases, Am. J. M. Sc. *232*:156 (Aug.) 1956.

SEARLE

Adequate Hospitalization for Treatment of Alcoholics

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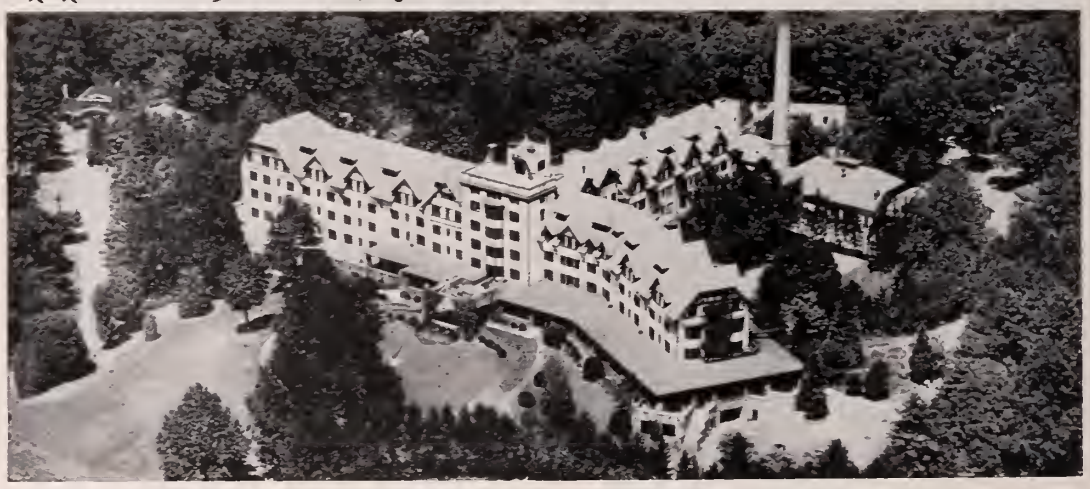
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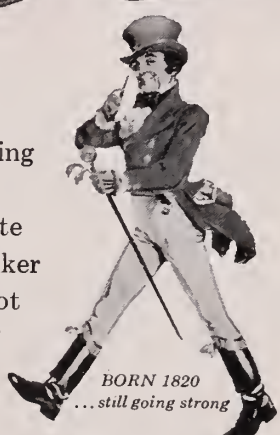
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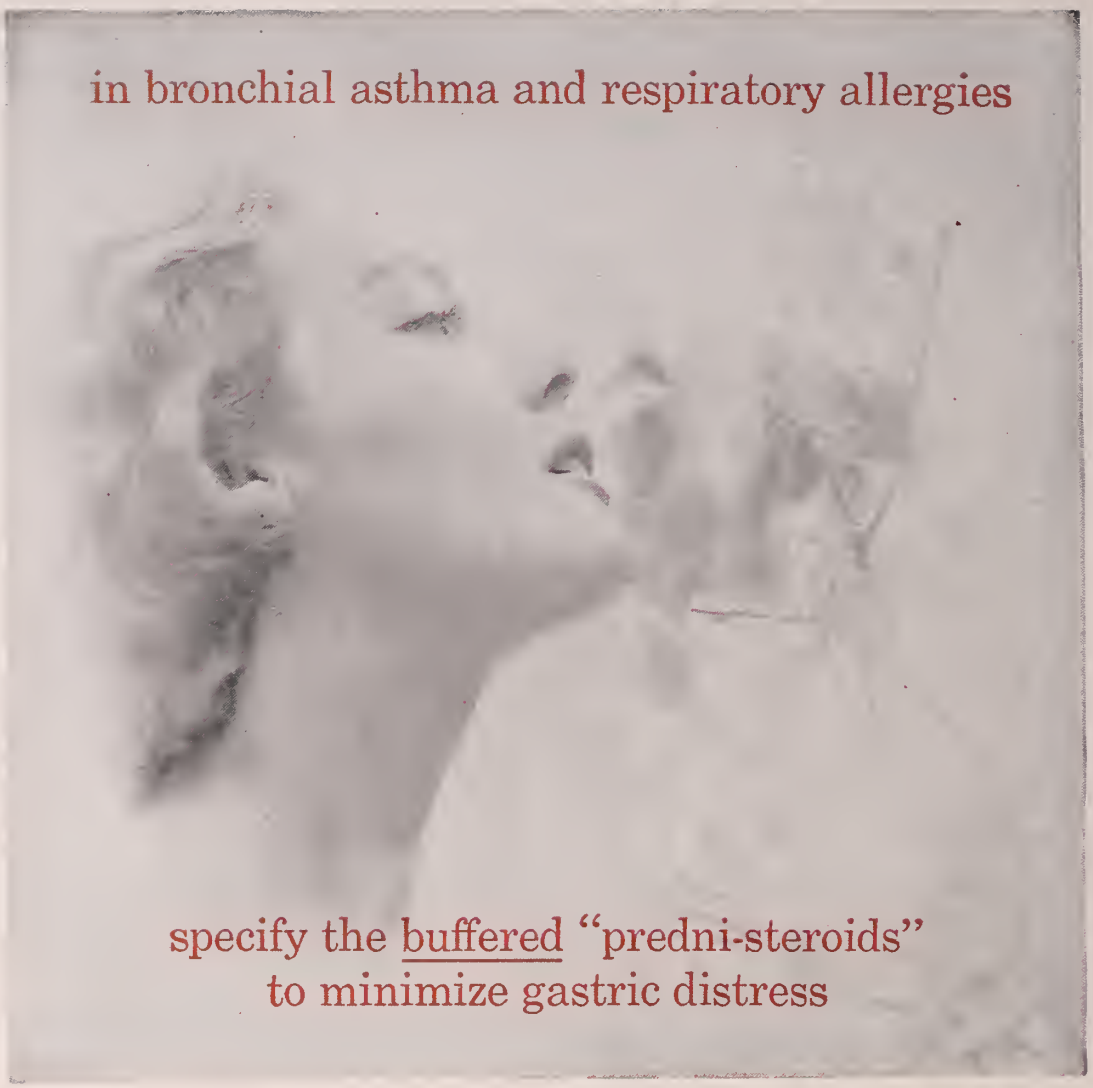
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Now, with small oral doses of this new and distinctive progestogen, you can produce the clinical effects of injected progesterone. In amenorrheic women for example, "As little as 50 mg. of [NORLUTIN] administered in divided doses over a five-day period was sufficient to induce withdrawal bleeding."[1]

CASE SUMMARY[2]

Amenorrhea of 4 years' duration in a 24-year-old married woman. A course of 10 mg. NORLUTIN twice daily for 5 days was followed after 3 days by menses lasting about 5 days. Since no spontaneous menstruation occurred during the following 35 days, she was given another course of treatment with NORLUTIN, 10 mg. twice daily for 5 days. This was followed by menses.

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PACKAGING: 5-mg. scored tablets (C. T. No. 882), bottles of 30.

REFERENCES: (1) Greenblatt, R. B.: *J. Clin. Endocrinol.* 16:869, 1956. (2) Hertz, R.; Waite, J. H., & Thomas, L. B.: *Proc. Soc. Exper. Biol. & Med.* 91:418, 1956.

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Sodium salicylate ..... 0.3 Gm.
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1. Levy, S., *JAMA.*, 153:1260, 1953
2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
3. Thompson, L., Procter, R., *Clin. Med.*, 3:325, 1956



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Eighty-seven patients with various infections of the skin were treated over a period of six weeks with [Signemycin]. Excellent or good results were achieved in sixty-seven, including eleven of twenty-two patients refractory to other antibiotics."

..., H. H.; Frumess, G. M., and ...chel, E. J.: Rocky Mountain M. J. ...6 (Aug.) 1957.

"Results of treatment with oleandomycin-tetracycline of 50 infections [chiefly respiratory] due to resistant organisms and 40 infections [respiratory, skin, urinary infections] due to sensitive organisms are very encouraging. In some of these patients, [Signemycin] was lifesaving, and in others surgery was made unnecessary. This confirms other reports."

...in, H.: Antibiotic Med. & Clin. ...apy 4:174 (March) 1957.

...d on case reports documented by ...pendent investigators in 26 coun... abroad, the clinical response ...ined with Signemycin in 1404 pa...es with a wide variety of infections ...successful in 1329 patients; in 13 ...s only was it necessary to discon... therapy because of side effects.

...rt on 1404 Cases Treated with ...emycin: Medical Department, Pfizer International. Available on request.

In 50 nonselected patients, Signemycin "...appears to be effective in the treatment of most general surgical infections, including virulent staphylococcus aureus infections. In some cases these infections had been clinically resistant to other antibiotics. The drug is apparently well tolerated."

Levi, W. M., and Kredel, F. E.: J. South Carolina M. A. *53*:178 (May) 1957.

Of 50 patients with various infectious processes, 26 had not responded to previous antibiotic therapy. With Signemycin "Ninety-six per cent of the mixed infections were clinically controlled. . . . and in none of the cases was there any reason to discontinue the drug."

Winton, S. S., and Chesrow, E.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 55.

Signemycin in 79 patients with severe soft tissue infections: "The average response of these cases was excellent and inflammatory symptoms subsided with almost uniform rapidity.... The magnitude and incidence of surgical intervention was reduced.... Side reactions were minimal. . . ."

LaCaille, R. A., and Prigot, A.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 67.

Five groups of patients (total 211) with acne were treated with one of five antibiotic agents, including Signemycin (55 cases). "The results were evaluated taking into consideration the usual response to such conservative conventional therapy and the rapidity of response." In 8 weeks, Signemycin rapidly attained and maintained the highest percentage of efficacy of antibiotic agents tried.

Frank, L., and Stritzler, C.: Antibiotic Med. & Clin. Therapy *4*:419 (July) 1957.

In the treatment of 78 patients with tropical infections, some complicated by multiple bacterial contamination or present for years, Signemycin was found to be "...an exceptionally effective agent," requiring smaller doses and less extended periods of therapy than with the tetracyclines alone, and "caused no notable toxic reactions."

Loughlin, E. H., and Mullin, W. G.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 63.

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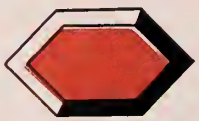
Most significant: Harmonyl causes less mental and physical depression—and far less of the lethargy seen with many rauwolfia preparations.

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Professional literature on this unique rauwolfia derivative is available upon request. Harmonyl is supplied in 0.1-mg., 0.25-mg. and 1-mg. tablets. Abbott





References: 1. Communication to Abbott Laboratories, 1956. 2. Moyer, J. H. et al: Deserpidine for the Treatment of Hypertension, Southern Medical J., 50:499, April, 1957.

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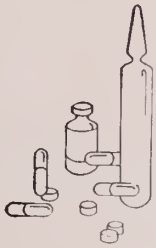
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New Chemotherapy

ARALEN® in RHEUMATOID ARTHRITIS

Extensive studies of rheumatoid arthritis and related collagen diseases—in this country and abroad—have shown the antimalarial Aralen phosphate to be highly effective and well tolerated in a large percentage of patients.

Clinical Results with Aralen in Rheumatoid Arthritis

Author	No. of Cases	Major Improvement	Minor Improvement	No Effect
Haydu[1]	28	22	5	1
Rinehart[2]	25	12	4	9
Freedman[3]	50	43	3	4
Bagnall[4]	108	77	12	19
Bruckner[5]	36	32	0	4
Cohen and Calkins[6]	22	17	3	2
Scherbel et al.[7]	25	9	8	8
Total	294	212 (72%)	35 (12%)	47 (16%)

- Success dependent upon persistent treatment
- Often of benefit where other agents have failed
- Remissions on therapy well maintained
- Remission of 3 to 12 months possible even if treatment is interrupted
- Tachyphylaxis not evident

GENERAL EFFECTS:

- Patient feels better
- Patient looks better
- Exercise tolerance increases
- Walking speed and hand grip improves

LABORATORY EFFECTS:

- E. S. R. may fall slowly
- Hemoglobin level may gradually rise

ANALGESICS AND STEROIDS:

- Requirements usually reduced or eliminated

JOINT EFFECTS:

- Pain and tenderness relieved
- Mobility increases
- Swellings diminish or disappear
- Muscle strength improves
- Rheumatic nodules may disappear
- Even severe or advanced deformity may improve
- *Active* inflammatory process usually subsides
- Joint effusion may diminish

DOSAGE:

Aralen is cumulative in action and requires four to twelve weeks of administration before therapeutic eff become apparent.

Latest information indicates that an initial da dose of 250 mg. of Aralen phosphate is prefera to the higher doses sometimes recommended. However, if side effects appear, withdraw Aralen for several days until they subside. Reinstate treatment with 125 mg. daily and, if well tolerated, increase to 250 mg. The usual maintenance dose is 250 mg. daily.

New Chemotherapy

INDICATIONS:

- Rheumatoid arthritis, acute or chronic —with or without adjunctive therapy.
- Spondylitis
- Arthritis associated with lupus erythematosus or psoriasis

THEORY OF ACTION:

Aralen appears to suppress or induce remission of rheumatoid inflammatory processes by inhibiting adenosinetriphosphatase.

HOW SUPPLIED:

Aralen phosphate: 250 mg. tablets in bottles of 100 and 1000.
125 mg. tablets in bottles of 100.

Tolerance:

Aralen is usually well tolerated. Toxic effects are usually mild and to date have been transitory in nature, disappearing completely either on continuance or cessation of therapy or on reduction in dosage.

Gastrointestinal disturbances (e.g. nausea, rarely vomiting, diarrhea, abdominal cramps, anorexia) are frequent manifestations of intolerance. Temporary blurring of vision (due to interference with accommodation) is also relatively frequent.

Pleomorphic skin eruptions (e.g. lichenoid, maculopapular, purpuric), although generally mild, may preclude the use of an optimum dosage schedule. If a skin reaction persists on a reduced dosage schedule, or recurs after reinstitution of treatment with gradually increasing doses, discontinue Aralen till the lesion again disappears and consider resuming treatment with Plaquenil® (brand of hydroxychloroquine).

Less frequently transitory vertigo, headache, lassitude, or neurological disturbances, such as nervousness, irritability, emotional change, and nightmares have been reported. Instances of unexplained slight gradual weight loss as the patient's general health and arthritic condition improved have been mentioned. Occasional instances of bleaching (depigmentation) of the hair have been described.

Although an occasional instance of leukopenia, with normal differential count, has been reported (WBC about 3000), it has not proved troublesome because it has always been reversible on discontinuance, or diminution of the dose. Even spontaneous reversal may occur while full dosage is maintained.

Caution:

Aralen is known to concentrate in the liver and, although hepatic damage has never been reported, the drug should be used with caution in the presence of liver disease. In the presence of severe gastrointestinal, neurological, or blood disorders, the drug should be used with caution or not at all. If such disorders occur during the course of therapy, the drug should be discontinued. Concomitant use of gold or phenylbutazone with Aralen should be avoided because of the tendency of these agents to produce drug dermatitis.

Clinical Comments:

Of fifty patients receiving Aralen therapy, "43 have become really well; that is, they have no stiffness, and any pain that occurs can reasonably be attributed to use of joints affected by secondary degenerative changes. They have no evidence of joint inflammation, but may have a raised erythrocyte sedimentation rate. They have little or no need for analgesics." *Freedman*[3]

"One hundred and twenty-five private patients have been carefully followed clinically and haematologically while receiving well over 200 patient-years of chloroquine [Aralen] therapy. The results are considered good in 70%, one-half of these cases being in remission. Improved work performance, sedimentation rate, and hemoglobin levels paralleled the major objective gain in this 70%. 90% of them remained on chloroquine [Aralen] therapy, half for more than two years. Classical peripheral rheumatoid arthritis, spondylitis, arthritis of juvenile onset, and rheumatoid disease with psoriasis, all appeared to respond about equally well.

"It is suggested that chloroquine comes closer to the ideal for long-term, safe, control of rheumatoid disease than any other agent now available." *Bagnall*[4]

"Out of the 36 rheumatoid arthritis cases we treated . . . favorable results were obtained in 32 cases. *Bruckner et al.*[5]

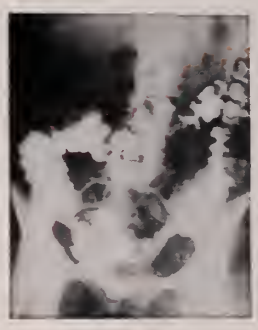
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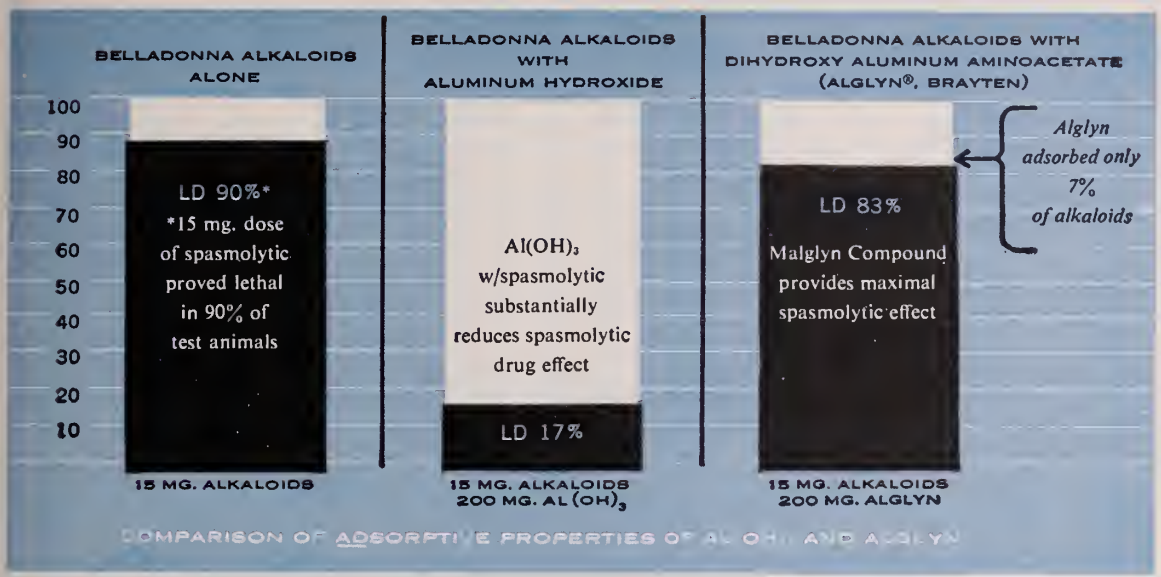
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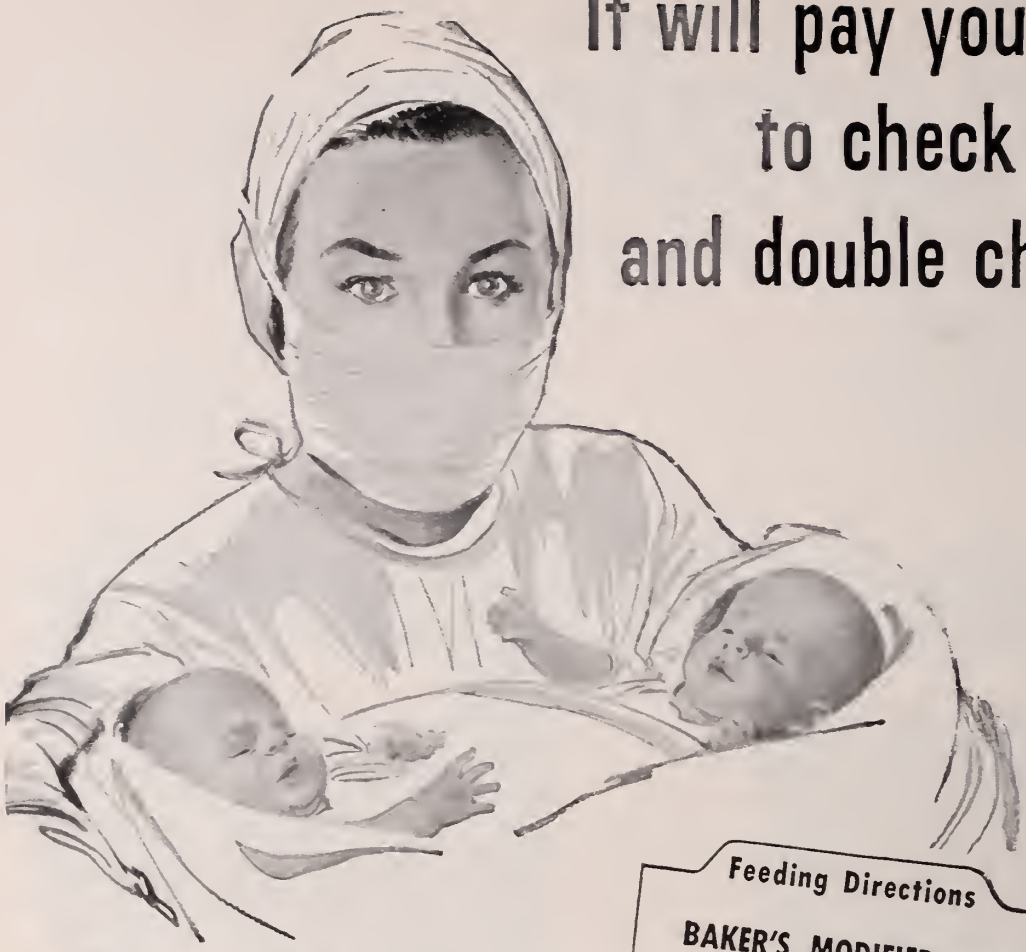
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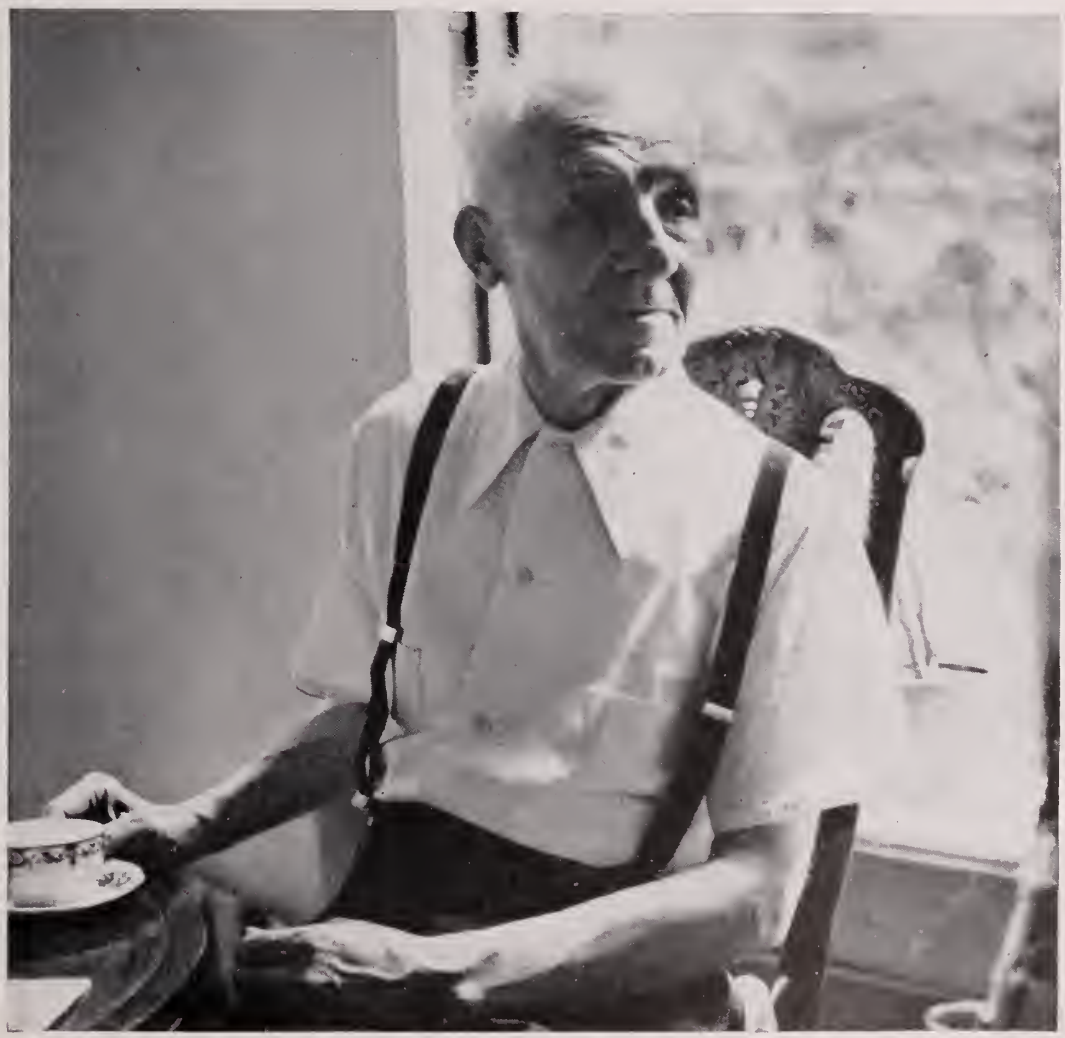
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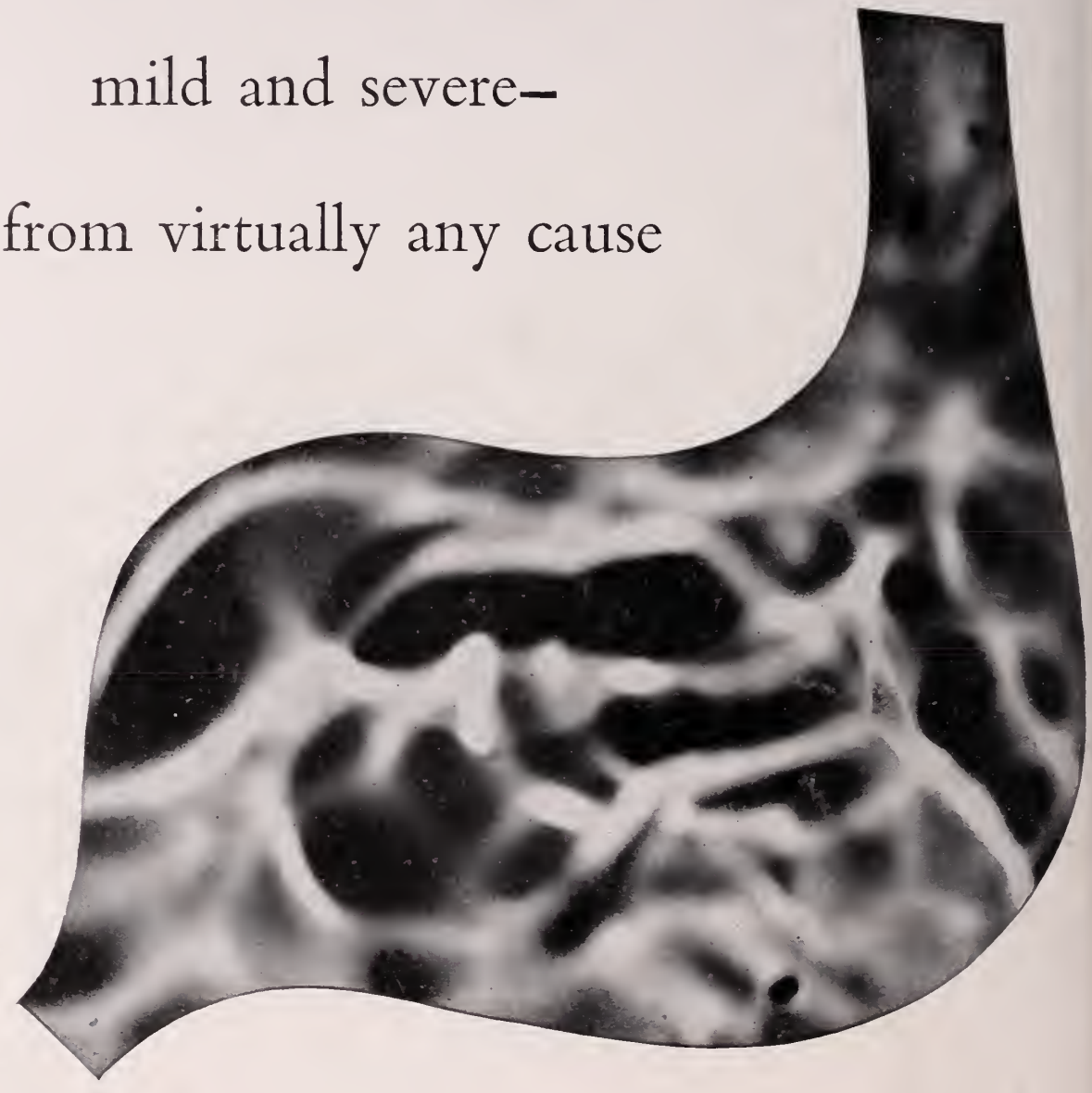
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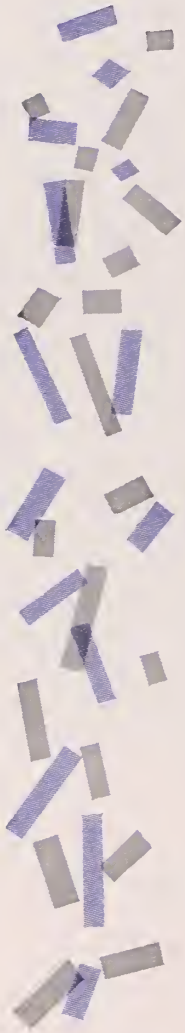
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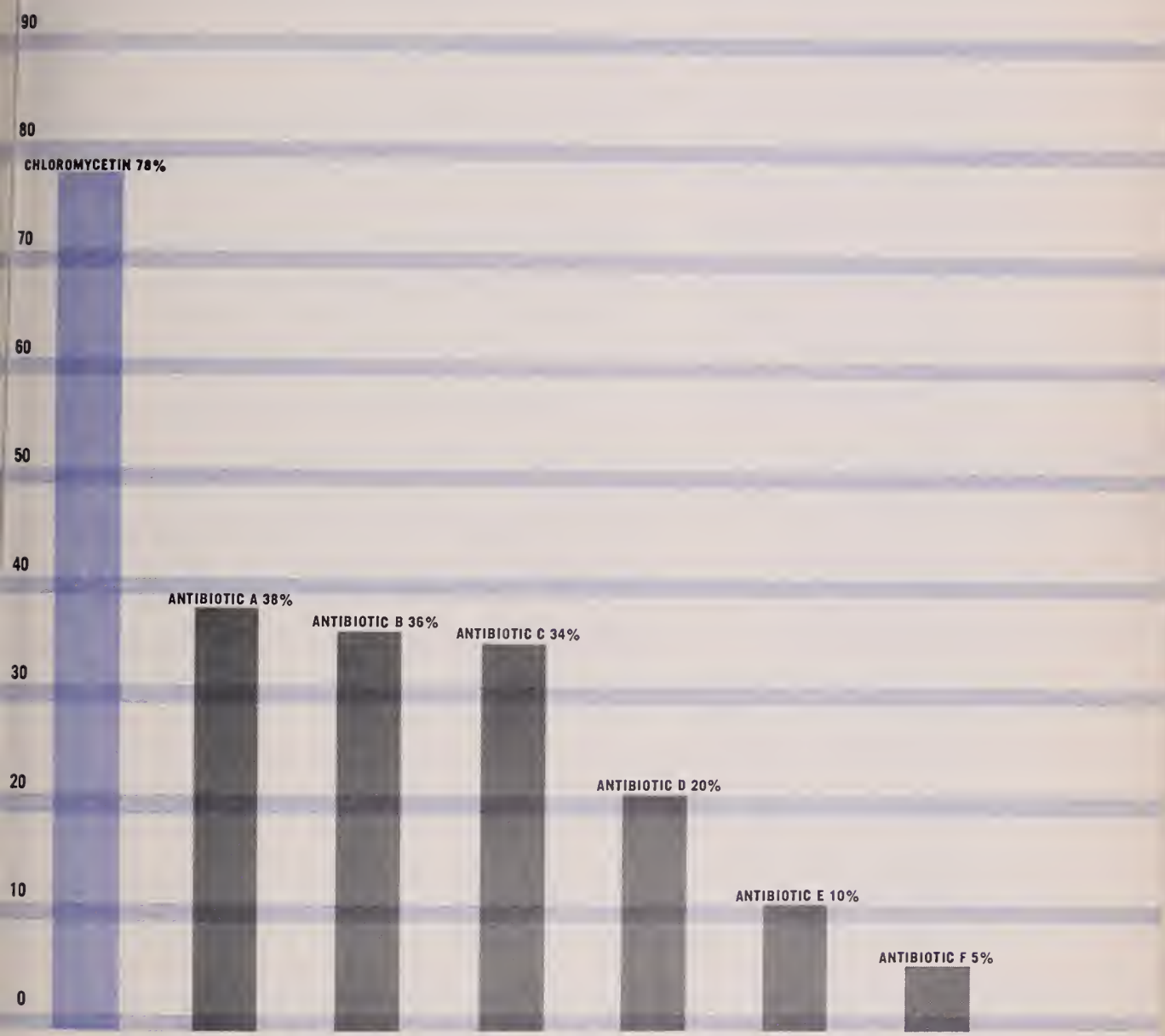
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COMPARATIVE SENSITIVITY OF MIXED PROTEUS SPECIES TO CHLOROMYCETIN AND SIX OTHER WIDELY USED ANTIBIOTIC AGENTS*



*This graph is adapted from Waisbren and Strelitzer.[15] It represents *in vitro* data obtained with clinical material isolated between the years 1951 and 1956. Inhibitory concentrations, ranging from 3 to 25 mcg. per ml., were selected on the basis of usual clinical sensitivity.

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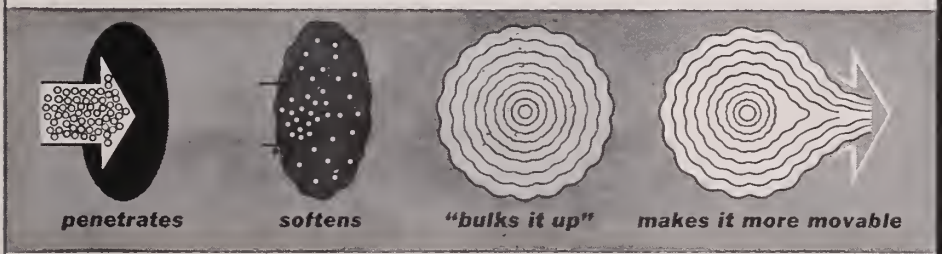
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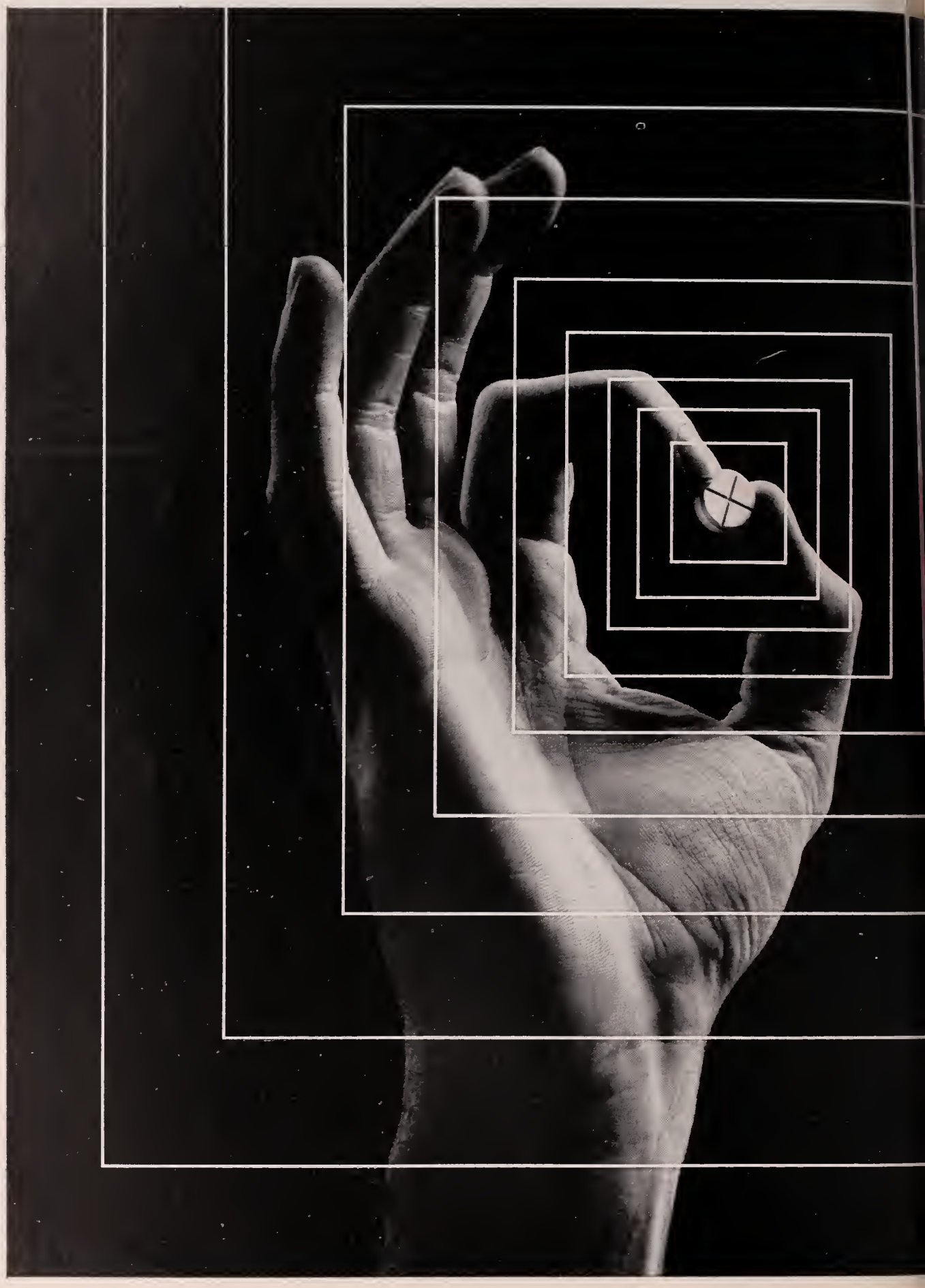
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1. Nichols, R. L. and Finland, M.: *J. Clin. Med.* 49:410, 1957.

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2. Thompson, L., Procter R., *North Carolina M. J.*, 15:596, 1954
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1. Hodges, F. T.: GP, *14*:86, Nov., 1956.

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Davis, H. H.; Frumess, G. M., and Mischel, E. J.: Rocky Mountain M. J. 306 (Aug.) 1957.

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Levi, W. M., and Kredel, F. E.: J. South Carolina M. A. 53:178 (May) 1957.

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Loughlin, E. H., and Mullin, W. G.: Antibiotics Annual 1956-1957, New York, Medical Encyclopedia, Inc., 1957, p. 63.

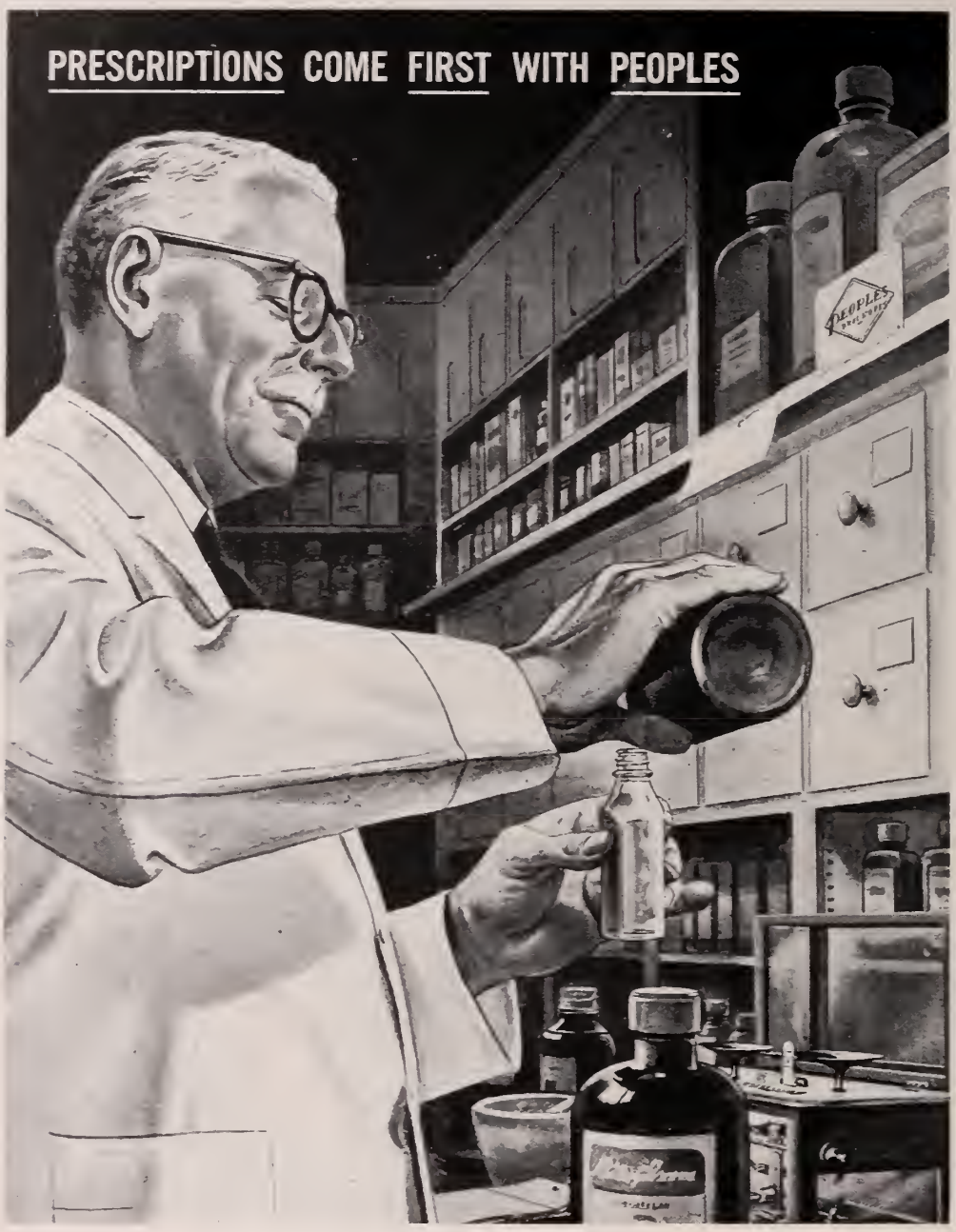
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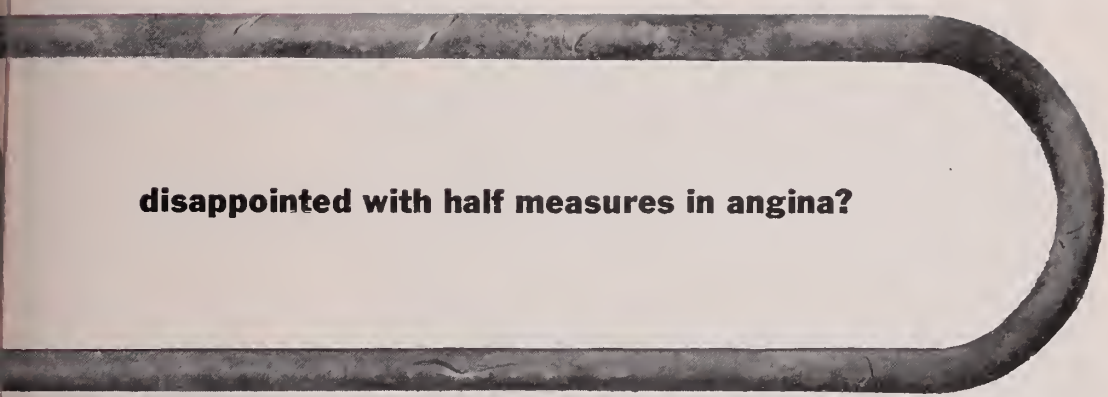
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1. Russek, H. I.: J. Am. Geriat. Soc. *4*:877 (Sept.) 1956.

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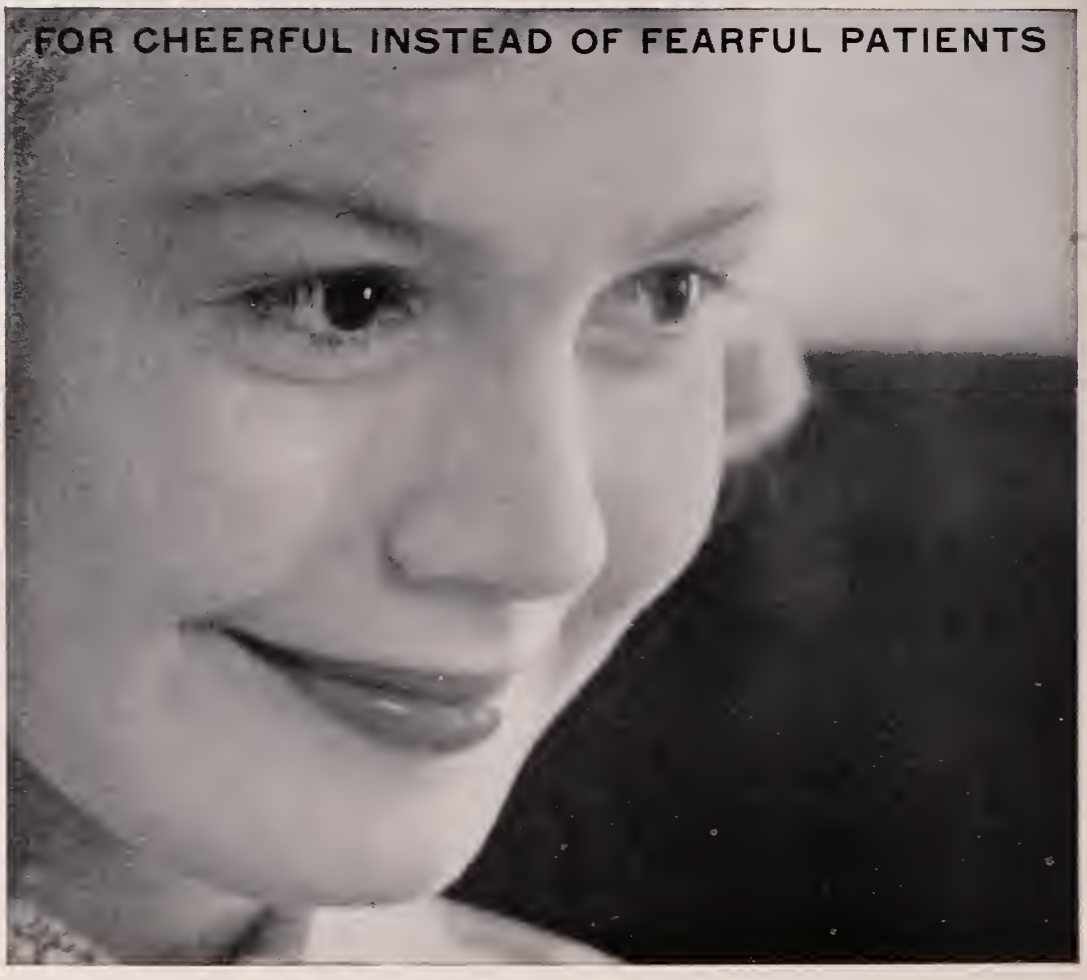


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...ner, J. L., and DeRisio, ... *Lahey Clin. Bull.* 10:45, ...ec., 1956.

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Isuprel-Franol Tabs
No. 100
Sig 1 tablet t.p.d
If attack occurs,
place 1 tablet under
tongue, swallow after
five minutes.

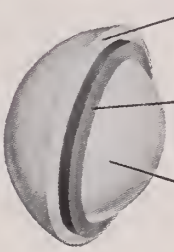
ISUPREL-FRANOL tablets (Isuprel HCl 10 mg.) for adults;

ISUPREL-FRANOL Mild tablets (Isuprel HCl 5 mg.) for children:

One tablet every three or four hours taken *orally* for continuous control of bronchospasm in chronic asthma. One tablet taken *sublingually* for sudden attack. "Flavor-timer" signals when patient should swallow.

Bottles of 100 tablets.

"Flavor-timer" signals patients when to swallow tablets



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Immediate effect sublingually—for emergency use

LEMON "FLAVOR-TIMER"
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FRANOL { Theophylline / Luminal / Benzylephedrine
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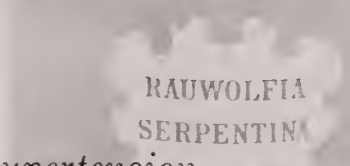
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tested chemically to insure total alkaloid content

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SYROCOL-PM

. . . especially useful in the dry, unproductive cough, SYROCOL-PM helps lessen the frequency and severity of coughs due to colds, coughs accompanying dyspnea and emphysema, and allergic type coughs. Useful too, in allaying inflammatory bronchial coughs as well as those of infectious origin. Possessing a highly palatable cherry flavor and mildly, soothingly, mentholated, SYROCOL-PM's taste appeal insures ready acceptance by children and adults alike.

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KNOX PROTEIN PREVIEWS



TWO NEW CLINICAL REPORTS REAFFIRM THE BENEFITS OF **GELATINE FO**





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Evidence continues to accumulate verifying the effectiveness of Gelatine in the treatment of brittle fingernails. Investigators report that the nails show objective evidence of improvement.[1,2,3,4] Furthermore, patients often volunteer that their nails "feel stronger," "look smoother," and "I can pick up things without them hurting."[1] Evidently the subjective sensations associated with improvement are nearly as important to some patients as the positive physical change in the nails' appearance.

Improvement Noted in 81% of Patients

See the chart below for a summary of the effect of Knox Gelatine in brittle fingernails as observed in all published reports. Photographic evidence of improvement, much of it in color taken before and during treatment, is available for most of the patients.[1,2,3] Please note, however, that where Gelatine was used in the treatment of pathological conditions associated with brittle fingernails only in psoriasis did the data show definite improvement.[1,3,4]

Response to Gelatine in Brittle Fingernails

References	Dosage	Duration of treatment	No. patients w/ brittle nails	No. patients improved	No. patients w/ brittle nails and other pathology	No. patients improved
1. Rosenberg, S., Oster, K. A., Kallos, A. and Burroughs, W.: *A.M.A. Arch. Dermat* 76:330, (September) 1957	7 Gm./day	3 months	50	43 (86%)	32[a]	9
2. Schwimmer, M. and Mulinos, M.G.: *Antibiot. Med. & Clin. Therapy* 4:403, (July) 1957	7.5 Gm./day	11-16 weeks	18	15 (83%)		
3. Rosenberg, S. and Oster, K. A.: *Conn. State Med. J* 19:171, (March) 1955	7 to 21 Gm./day	15 weeks	36	26[b] (72%)		
4. Tyson, T. L.: *J. Invest. Dermat.* 14:323, (May) 1950	7 Gm./day	13 weeks	12	10[c] (83%)		
Totals	7-21 Gm.	11-16 weeks	116	94 (81%)	32	9 (28%)

a. Gelatine improved psoriatic nails in 5 out of 12 cases. In onychomycosis and other pathological conditions of the nail it was of no appreciable help.

b. Of the failures, 2 had congenital disease of the nails, 3 were diabetics and 3 took the medication for less than one month.

c. One patient with psoriasis and arthritis and one patient with psoriasiform nail changes showed improvement in 2 and 3 months respectively.

BRITTLE FINGERNAILS

Important Note

The pharmacodynamic effects of Gelatine are manifested through its high Specific Dynamic Action, and therefore, depend upon adequate and prolonged intake. All published clinical research has been conducted using 7 to 21 grams (1-3 envelopes) of Knox Gelatine per day for the three to four months that are required for complete regrowth of the nails. Smaller dosage would induce a lesser specific dynamic action and thus prove ineffectual in correcting the brittle nail defects. More detailed information on brittle fingernails and reprints of the two more recent clinical reports are available on request. Please use the attached coupon.

Knox Gelatine Company
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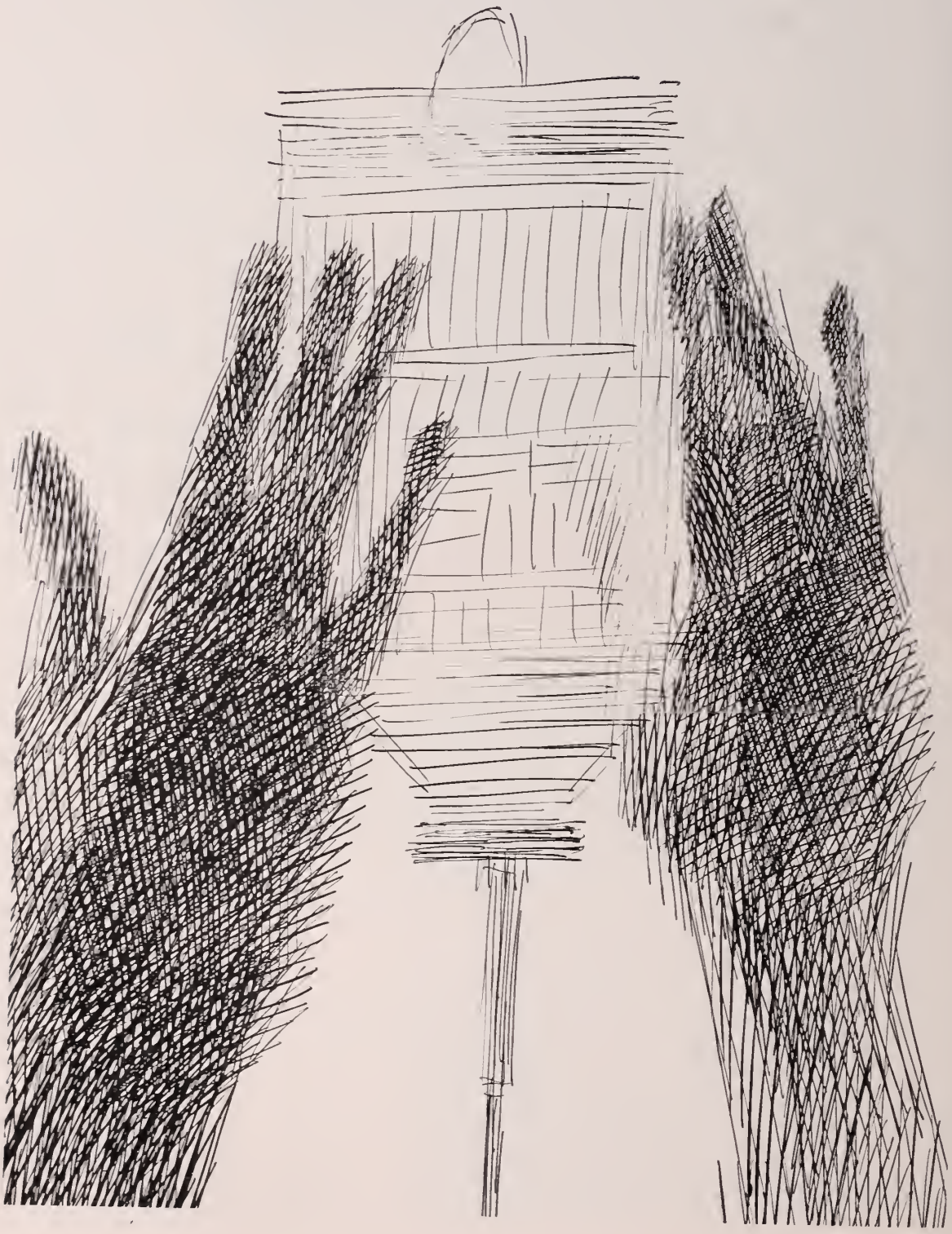
☐ Rosenberg, S., Oster, K. A., Kallos, A. and Burroughs, W.: *A.M.A. Arch. Dermat.* 76:330, (Sept.) 1957.

☐ Schwimmer, M. and Mulinos, M.G.: *Antibiot. Med. & Clin. Therapy* 4:403, (July) 1957.

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In its present form SPONTIN is administered intravenously, using the drip technique. The required dosage is dissolved in 5% Dextrose in water and administered in 35 to 40 minutes.

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SPONTIN comes as a sterile, lyophilized powder in vials representing 500 mg. of ristocetin A activity. While distribution is limited, your emergency needs will be handled by your Abbott representative, or at the nearest Abbott branch. Literature is available on request.

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"The most striking feature is that this drug does not act as a hypnotic...."[1] "No toxic side-effects were noted, with particular attention being paid to the hematopoietic system."[2]

dosage: *Children:* 150 mg. (½ tablet) three or four times daily. *Adults:* 150-300 mg. (½ to 1 tablet) three or four times daily.

supplied: 300 mg. scored tablets, bottles of 48 and 500.

(1) Asung, C. L.; Charcowa, A. I.; and Villa, A. P.: Sea View Hosp. Bull. *16*:80. 1956. (2) Asung, C. L.; Charcowa, A. I., and Villa, A. P.: New York J. Med. *57*:1911 (June 1) 1957. (3) Report on Field Screening of Nostyn by 99 Physicians in 1,000 Patients, June, 1956.

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Ectylurea, AMES
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"of value in the hyperactive as well as the emotionally unstable child"[3]



'Dexamyl' quieted the symptoms of premenstrual tension

(from the case records of a Philadelphia general practitioner)

The Patient: 28-year-old housewife with no organic disease and a non-contributory history.

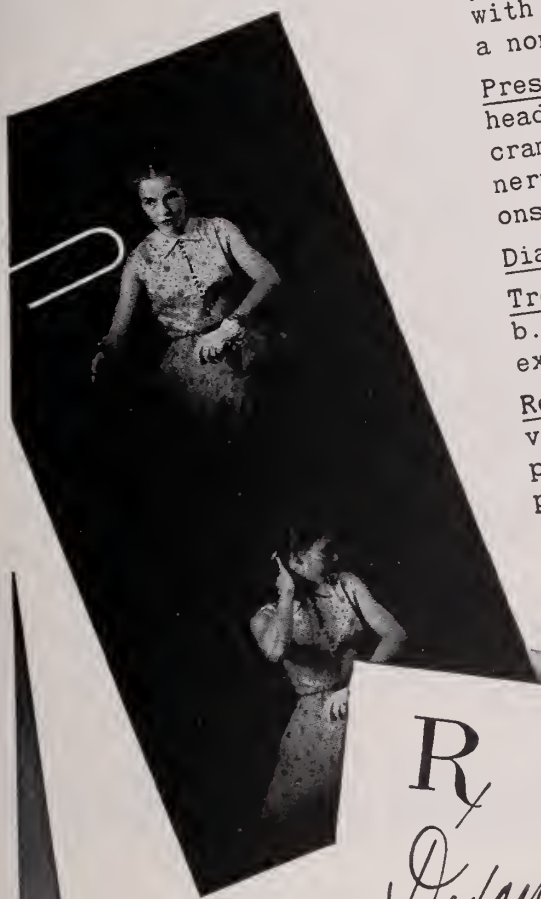
Presenting Complaints: Dome-like headaches, severe fatigue, pelvic cramps and an "all pervading nervousness"associated with the onset of menses.

Diagnosis: Pre-menstrual tension.

Treatment: 'Dexamyl'; one tablet b.i.d., for several days before the expected menses.

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Smith, Kline & French Laboratories,
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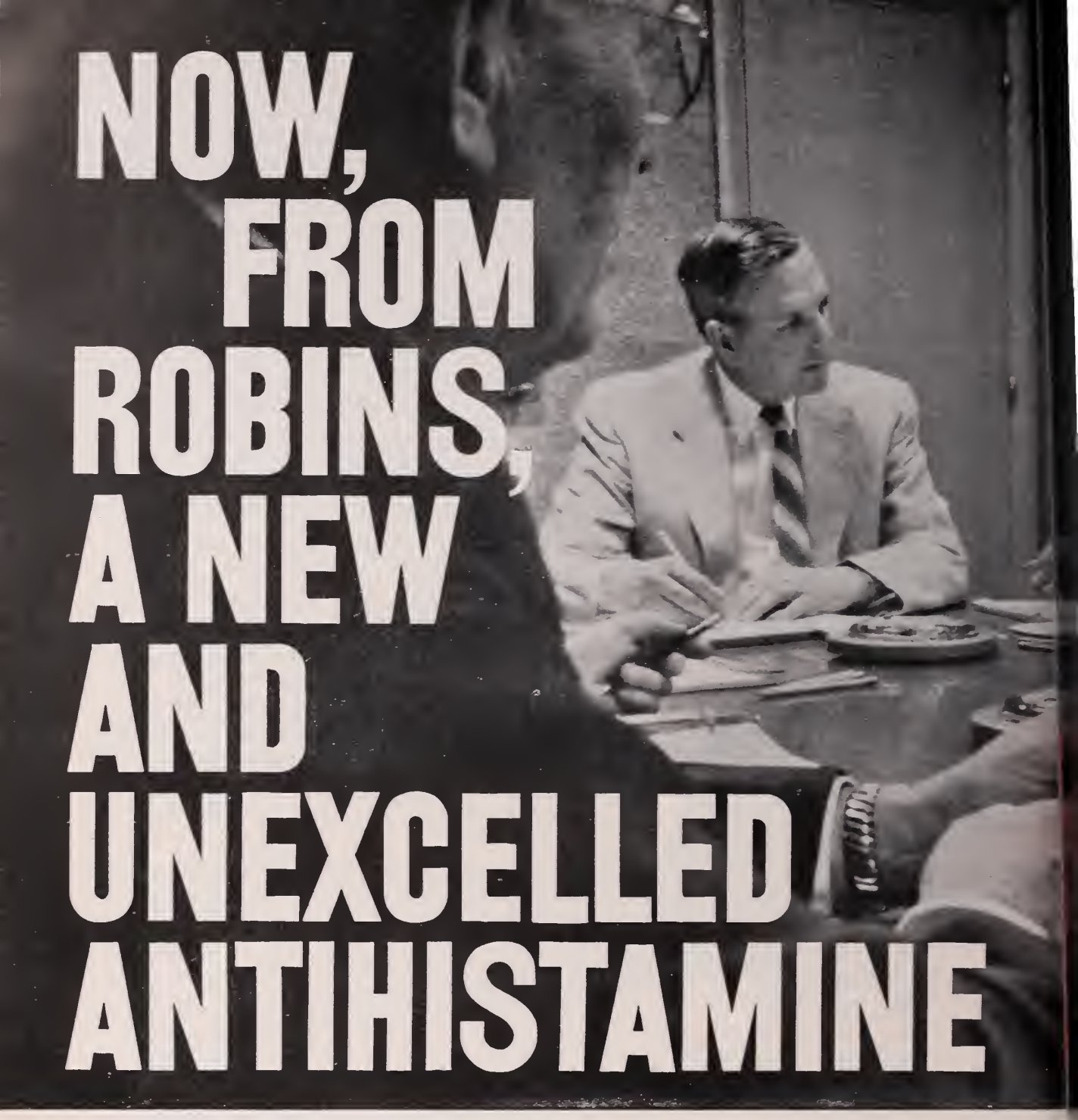
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» unexcelled antihistaminic action

Diagnosis	No. of Patients	Response				Side Effects
		Excellent	Good	Fair	Negative	
Allergic rhinitis and vasomotor rhinitis	30	14	9	5	2	Slight Drowsiness (2
Urticaria and angioneurotic edema	3	1	1	1		Dizzy (1)
Allergic dermatitis	2		1	1		Slight Drowsiness (2
Bronchial asthma	1		1			
Pruritus	1		1			
Total	37	15	13	7	2	Drowsiness (5) Dizzy (1) 16.2%

From the preliminary **Dimetane Extentabs** studies of three investigators. Further clinical investigations will be reported as complete



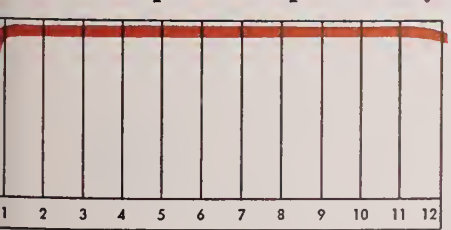
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Children over 6—One tab. or two teaspoonfuls Elixir t.i.d. or q.i.d., or one Extentab q.12h.

Children 3-6—½ tab. or one teaspoonful Elixir t.i.d.

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bland soothing drops

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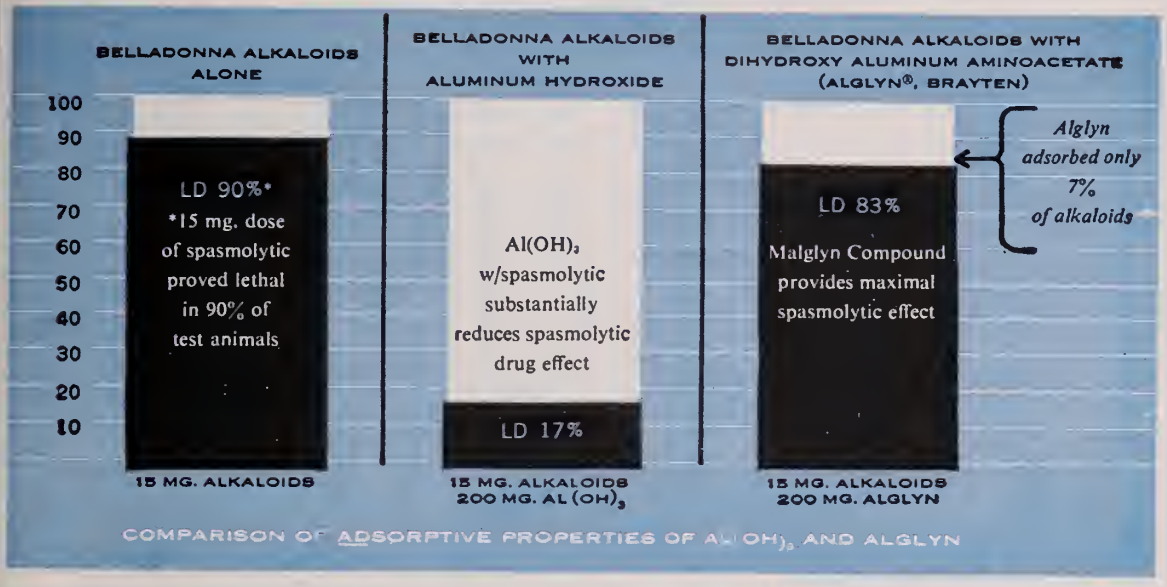
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(dihydroxy aluminum aminoacetate with belladonna alkaloids and phenobarbital)

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Also supplied: ALGLYN® (dihydroxy aluminum aminoacetate, N.N.R. 0.5 Gm per tablet). BELGLYN® (dihydroxy aluminum aminoacetate, N.N.R., 0.5 Gm. and belladonna alkaloids, 0.162 mg. per tablet).

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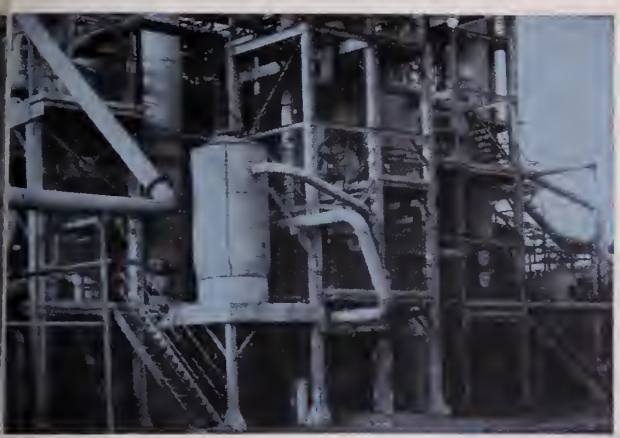
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References

1. King, J. H., Jr.; Passmore, J. W.; Skeehan, R. A., Jr., and Weimer, J. R.: Tr. Am. Acad. Ophth. *59*:759, 1955.
2. Kuhn, H. S.: Tr. Am. Acad. Ophth. *55*:431, 1951.

*T. M.

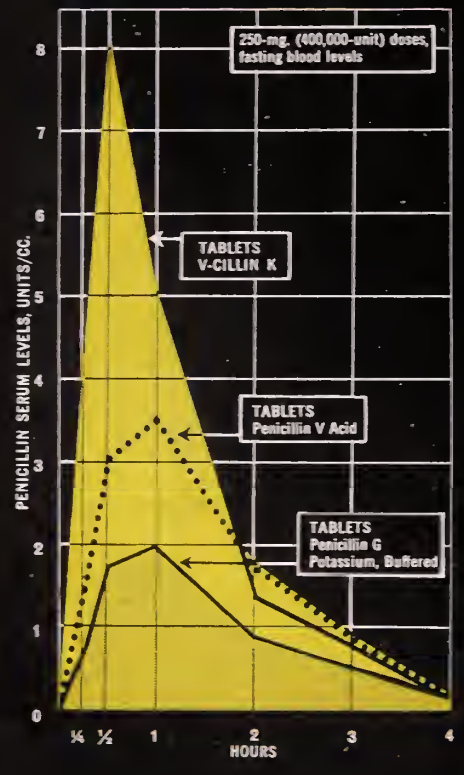
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The Virginia
MEDICAL
MONTHLY

December, 1957

Vol. 84, No. 12
Whole No. 1267

Guest Editorial . . . .

Treat the Disease

THE DISCIPLES OF Dr. Frank Apperly will recall a metaphor he uses not infrequently and to great advantage—"Don't pour water on the fire alarm!" We are ever being exhorted to treat the *disease* and not primarily the symptoms or signs. We are admonished not to use powerful drugs for pain till the diagnosis is definitely made, in order not to obscure the picture.

This is not, however, to advise neglecting the symptoms and sufferings till they go away on correction of the basic pathologic process. We shold not withhold a simple anodyne for, say, a tension headache while exploring other possible causes (although during the process of exclusion the headache will doubtless wear itself out). We are ever urged to be wary in using ataractic agents lest we cover up a severe psychoneurosis which the drugs do nothing to overcome. It is a standing joke among physicians (I hope not among the laity), ". . . and if the penicillin doesn't cure you, we'll examine you to see what's wrong".

In some patients we are obliged to attempt to control the end-result of the disease for want of understanding of the disease itself. Toxemia of pregnancy is a prime example of this situation. Our therapeutic efforts are directed toward fluid retention, hypertension and possible convulsions but we are still a few steps away from correcting the underlying cause of these outward manifestations.

Postpartal abdominal and back pains are all too often treated symptomatically without thought for the etiology. Some physicians of my acquaintance give progesterone in an effort to counteract the proclivity of the postpartal uterus to contract and "cramp" periodically. This is, after all, more to the point than giving analgesics and opiates (albeit some increase in lochia may supervene).

In premenstrual tension, rather than rely solely on "mood elevators", "tranquilizers" and other symptomatic approaches, it has been suggested, more rationally, that we employ pitressin-inhibitors.

My attention has focussed of late on the possibility that pelvic and parametrial edema is the origin of postpartal backache and lower quadrant distress. Often when performing a laparotomy in the immediate puerperal period, one is struck with the intense swelling and engorgement of the fallopian tubes, mesosalpinges and broad ligaments. Could there be a connection between this condition and the pains? This cannot be evaluated in a patient in whom the condition is actually visualized since the postoperative pain all but obscures other sources of discomfort for a time. If there is parametrial edema, why not edema of the uterosacral ligaments and elsewhere in the pelvis? And if edema, why not resultant symptoms? (Indeed the pelvic congestion syndrome as a gynecologic entity has been authoritatively outlined.)

And if symptoms from the edema, then we can expect and obtain lasting relief from such symptoms, not with analgesics, but with *diuretics*. Regarding the basic disturbance—why edema? Probably it stems from electrolyte changes which occur during gestation plus the hypervolemia, plus hydrodynamic effects in the pelvic structures during uterine contractions. Now to prevent this state of affairs we have but to prevent pregnancy. This as an inflexible rule is patently absurd. Thus the next best step is to treat the essential derangement resulting from parturition.

Is it not in *all* situations more logical to attack the basic aberration, when known, than to attack the outward evidence of the disorder?

Let us get back to the beginning of things. The alarm is highly useful but the fire wants the water. To swat mosquitoes may be fine, but, better, drain the swamp.

T. Stacy Lloyd, Jr., M.D

And Dr. Robert L. Novy Reports* . . .

"The ideals and purposes of Blue Shield are precisely the same as the age-old ideals and purposes of medicine: to serve people singlemindedly, regardless of personal profit.

"Blue Shield safeguards the basic freedoms of medical practice which are fundamental to good medical care. Blue Shield hopes to strengthen the doctor's traditional way of practicing medicine, not to change it or destroy it. Blue Shield protects the patient's right to choose his doctor, the doctor's right to accept or reject the patient, and their common right to inviolate confidential relationship.

"Since Blue Shield was created, however, a whole now generation of doctors has come into practice who know nothing of the struggle and sacrifice of its founders. Many of these doctors take Blue Shield for granted, and the success of Blue Shield has even led many of their older colleagues to take it for granted, too.

"Indifference, apathy, and complaisancy can be fatal to Blue Shield and to the whole voluntary medical care prepayment program. Blue Shield deserves the doctor's wholehearted support because it is fashioned in the doctor's own image; it is his own creation; and it is designed to strengthen the freedoms that he and his patients want to keep strong and safe."

*From a speech presented to a Conference of Blue Shield Plans.

Socialized Medicine

JAMES D. HAGOOD, M.D.
Clover, Virginia

IT IS A PLEASURE for me to talk to you on Federal-State controlled medicine, because "Socialized Medicine" is something I have fought all my life. And it is a subject that will be with all of you doctors all your days. The question is whether you will be living and practicing under it, or be fighting it successfully and maintaining an independent practice of medicine. As long as we have a democratic system of government—and I for one hope that will be forever—we will have those among us who will want the government to be in charge of doctors and hospitals.

How much influence these people will have on the general public, and more importantly on the Congress and on our legislatures, is something the doctors themselves will largely decide. If the doctors fight socialized medicine with intelligence and determination, as they have on some occasions in the past, it will remain pretty much a theory. If the doctors relax in the years ahead, I can see nothing but the complete socialization of medicine, and in the not too distant future.

Now, to me, socialized medicine resembles old-fashioned sin in more ways than one. Both terms are general and vague. Both have certain attractions that in the long run won't do you any good. Sin comes in an infinite variety of shapes and forms, and sometimes it doesn't look like sin at all. It seems to me that socialized medicine, too, has this questionable advantage. The old-fashioned preacher, who had to steam up his flock or go hungry himself, often attacked only those sins that weren't very popular in his neighborhood anyway. There could be a great deal of righteous indignation, but the sinners in the flock could go right on doing what they wanted to do. They were involved in the popular sins, not the unpopular ones that the preacher was shouting about.

So when you think there might be some part of socialized medicine that wouldn't be too dangerous, you will be letting yourself in for a lot of trouble later on.

As I mentioned, there are various types and degrees of sinning, and you can pick out what you want. There are no questions about the big sins—you don't fool even yourself on them. But you might want to take a chance on the little ones.

In a way, socialized medicine presents identical temptations.

To the general public, and unfortunately to part of the profession, the term "Socialized Medicine" means a federal system for the regulation, control and financing of hospitalization and medical care. There are few, if any, hospital and doctor bills for people to worry about—the cost goes on their tax bill instead. Also, the federal government looks over the doctor's shoulder and, after a while, tells him how to treat patients.

A program like this was presented in the Federal Congress about ten years ago. It was slightly disguised in two ways. First, money was to be collected through an increase in social security taxes, so the program was called National Health Insurance. Second, the people were told that they were to have a free choice of doctor and hospital—that nothing would be changed. However, the deception was effective with very few people. Led by the American Medical Association, the campaign against this socialized medicine bill was joined in vigorously by state and county medical societies, the dentists, the druggists, hospital leaders, and in fact by almost every segment of the health profession and industries.

The result was a resounding defeat for this measure. The Senate committee that had been a sounding board for the arguments actually voted down the bill.

Now because this particular bill has not been seriously considered since that time, some people have the idea that there has been nothing going on in this field. I, personally, never have been tranquilized to this extent.

In the way of information and material that my friends in Washington send me, this does more than confirm my belief that we are enjoying a few small sins of socialized medicine right now. But more important, it is evidence that very soon, probably next year, a campaign will be under way to enact a certain hospitalization bill that clearly is socialized medicine—it isn't the whole program, but it's quite a bit.

Presidential Address delivered at Annual Meeting of The Medical Society of Virginia, Washington, D. C., October 28, 1957.

First, I would like to tell you something about the forward movement of government into medical fields, a movement that has been going on without let-up for the last ten years. Now I am not attempting to cover all these programs with the blanket indictment of "Socialized Medicine." Nor do I believe that a medical program is dangerous just because it's a big one or because it's run by the Federal Government. Some of these operations to my mind are very close to socialized medicine, and others are absolutely necessary. But I think they are all worth reviewing as a trend, so you will realize what has been happening in Washington.

After looking over these federal medical programs, I shall go into detail on what appears to be in store for next year—a drive to build into the federal structure something that unquestionably is socialized medicine.

Because Congress has encouraged the Veterans Administration to broaden its hospital benefits for non-service connected cases, and in some instances has directed an expansion, we now have a large section of the population under what we have to call a specialized system of socialized medicine. There are between 22 and 23 million living veterans in this country today. Perhaps two million of them have injuries or conditions that have been certified as service-connected. There is no argument about their care—they are entitled to and get the best possible attention from their home town doctors or in VA hospitals.

That leaves at least 20 million other veterans who, under law, are entitled to free VA hospitalization under two conditions. First, if the hospital has room for them. Second, if they swear that they cannot afford to pay for private care. Under pressure from the AMA and some other groups, the Veterans Administration in the last few months has tightened up admission policies on this group to some extent. But the law still stands; they are entitled to free care for conditions that have no connection whatever with their military service.

You can call this veterans care; I find that I have to call it socialized medicine.

Now for another group that is quite large. I refer to the more than five million persons who are on public assistance and are entitled to some Federal asistance. In addition to helping to pay the ordinary living expenses for these people—housing, clothing, food, and so forth—the Federal government also sets aside a certain amount of money to help pay for their medical care. This medical care program is not a small one. The people affected represent about three per cent of the total population. If states take advantage of all the United States money offered for their medical care, by matching it 50-50, the U. S. will be spending about 200 million dollars a year for this program alone. Now this operation certainly is a humanitarian one, and I don't want to imply that there is a better way to give these unfortunates medical care. But they are medical wards of the states and the Federal Government.

The Federal Government, of course, is obligated to give the best of medical care to members of its Armed Forces, who number 2.7 million. Until last year, the services gave a certain amount of medical care also to the families of servicemen. It varied with the particular services and varied geographically. But this care was provided by uniformed doctors and in military hospitals, or it wasn't provided at government expense. Obviously, some families were discriminated against for reasons beyond their control. Then, last year, Congress decided to make all dependents eligible for federally financed medical care, and to allow them to use civilian physicians and hospitals. That means that another two and a half million persons, wives and children of servicemen, besides care in military facilities also are eligible for certain civilian medical services such as in hospital and full maternity care.

The U. S. Public Health Service, making use of its 72 hospitals and its clinics, is responsible for the medical care of two other groups, numbering together almost 600 thousand persons. These are merchant seamen, about 200 thousand, and Indians and Alaskan natives, about 370 thousand.

You are all familiar with workmen's compensation cases. Well, it may be a surprise to you that the Federal government runs the country's biggest compensation program. It is responsible for the medical care of its 2½ million civilian employees for on-the-job injuries or other conditions.

The State Department has a program for the medical care of members of its foreign service, and other federal departments now want the same benefits for their employees who are stationed overseas.

Next year may see by far the largest group join the millions who already receive part or all of their medical care from the Federal Government. They are the seven million U. S. Civilian workers and their dependents. Legislation is now before Congress, and will be considered next year, which would put these people under a nationwide health insurance plan, with the government paying a third or more of the cost.

In money spent on medical research, the federal government is bounding ahead even faster than it is in medical care. If non-government schools and private industry are not investing enough money in medical research, there is probably no question but that the United States has to take the lead.

From a purely statistical viewpoint, it is interesting to see how the government has increased its medical research budget. Ten years ago, the four major agencies of the government were spending a total of 28 million dollars a year for medical research. By 1955, the total for the Institutes of Health alone had moved up to 97 million. Then in 1956, Congress did an amazing thing. It gave these research institutes more than double the amount of money they had asked for. The total was almost 225 million dollars. This year, Congress was even more generous.

Aside from the VA's care of non-service connected cases, which I regard as socialized medicine, there might be some question of how to categorize the huge federal medical operations I have been discussing. These programs may be the only way to handle the problems, or it might be that states and local communities and individuals could do more than they are now doing. Some of these programs may in themselves be a phase of socialized medicine—or, again, they may actually be stalling off socialized medicine. I mostly want to emphasize that in medical matters the federal government is getting bigger and bigger.

I have no doubt whatever about the hospitalization plan I mentioned earlier, which will be pushed hard in Washington by its sponsors next year. It is certainly clear-cut socialized medicine.

To give you the necessary background about this hospitalization plan, I shall have to go back six years, to the days of Truman and Ewing. Oscar Ewing, you recall, was administrator of the Federal Security Agency, now the Department of Health, Education, and Welfare. In 1951, at the request of labor leaders, Truman and Ewing presented Congress with a new idea.

They proposed that all persons covered by social security would be eligible for a maximum of 60 days of government-paid hospitalization each year after they had reached age 65.

Now this is exactly the mechanism envisioned to finance the old Wagner-Murray-Dingell socialized medicine bill that had been defeated four years earlier. The money is collected through OASI social security taxes, and the OASI funds are used to pay the costs.

It is easy to see what would happen, once a plan like this were made the law of the land. Of course, in a short time those who are receiving OASI payments because of disability would be made eligible, regardless of their age. Also, there would be great pressure to drop the age for all persons enrolled in OASI.

The greatest underlying danger, of course, is that this would be the pilot model, the prototype for a system of socialized medicine. When it was first offered, the plan attracted some attention. Some people liked it because it would "do something for the old people". Others thought it was the answer to a problem because it would be easy to operate. It had appeal for a few observers because it was described as an "insurance program".

There would be no drain on the general tax revenue, and that made it palatable to those who value a balanced national budget.

So, at first, in 1951, the proposal for free hospitalization of the aged had a measure of public support.

Before many weeks, however, leaders of American medicine were able to show it up for just what it was—a slice of the socialized medicine that had been defeated so definitely just a few years before.

In 1951, the hospitalization bill was not even reported out of committee. And, until now, the idea has not been able to revive much interest.

As one example of the plans that the Government is making without the knowledge of the medical profession or the general public, I cite the following:

Toward the closing of the last Session of Congress, a Bill, H. R. 9467, was introduced which goes further even than the Murray-Dingle scheme in its provision of hospital and surgical benefits for Social Security beneficiaries. This will be known as the AFL-CIO bill and it will undoubtedly attract more sponsors in 1958.

In addition to providing hospitalization for men over 65 and women over 62, H. R. 9467, also would greatly liberalize a wide range of social security benefits and increase both the ceiling on taxable income and the rate of taxation to meet the added costs.

To raise the needed money for the new benefits, H. R. 9467 would levy social security taxes on all income up to $6,000 (present limit is $4,200), and increase the tax rate one half of one per cent for employer and employee alike, and three-quarters of one per cent for the self-employd. Maximum retirement or disability benefits payable to a family (one wage earner) would be increased from the present

range of $50 to $200 per month to a range of $55 to $305 per month.

Another example of Governmental plans is the present effort to amend Public Law 565, Paragraph 4-B of the 83rd Congress, Senate Bill 2068, If I understand this amendment right, and I think I do, it can be construed without fixed limitations as to funds, both for construction and for services to patients. To me, this seems very unwise and criticism from a variety of sources will surely follow. It would be a distinctive advantage to the project itself and a protection to the medical profession if this open end aspect of the amendment were dealt with in terms of appropriate limitations. If the amendment is to be adopted, I would recommend that the Clinic be affiliated with a medical school, either in Washington or Virginia, under conditions approved by the Surgeon General of the Health Service, or that it be placed under a Board appointed by the Secretary of Health, Education and Welfare and approved by Congress. If this facility is to be a regional pilot rehabilitation demonstration center financed by the Government—and that is my information—it should be under Federal control or positive affiliation with a publically recognized agency. This will protect both the public interest as well as the medical profession.

But now the picture has changed somewhat. For one thing, there is vastly more interest in the problem of the aged. In the interval a special White House Conference has been held on the aged, and a special unit has been formed within the Department of Health, Education, and Welfare to work on this subject.

Also, insurance leaders are made more and more aware of the difficulties inherent in offering health insurance to persons over age 65. They require more, not less medical care, and generally they are not in a favorable position to pay the additional premium that would be needed. The result is that younger workers enrolled in health insurance plans must meet part of the cost of supplying medical care to those past 65.

There is a growing danger that many voluntary health insurance plans, hard pressed by competition, will be willing to accept this panacea, despite its ominous threat for the future.

People simply cannot turn any part of the responsibility for their health and welfare over to the planners of the state itself and expect to remain free. Once we lose sight of this fact, which was so clear to the wise men who established our nation, then we have betrayed the very fundamental principles on which our government is founded, and we are doomed to failure. If we forget this and are deluded by the promise of "something-for-nothing", if we accept the government-will-take-care-of-you philosophy, if we surrender our freedom for a mess of pottage, then we shall have betrayed our heritage, and all our battles for freedom will have been nothing more than a farce. We can take the road to freedom or we can take the road to slavery—which shall it be?

The wise men down through the ages have recognized this responsibility that rests so heavily upon those in positions of leadership. I would remind you of what a few of them have said down through the years—

Plato expressed it a long time ago when he said, "The penalty good men pay for indifference to public affairs is to be ruled by evil men."

Then came the Apostle James who expressed it another way. "To him that knoweth to do good and doeth it not, to him it is a sin."

And Dante, by the time of the 12th century, put it a little more pungently when he said, "The hottest places in Hell are reserved for those who in a period of moral crisis maintain their neutrality."

After 600 years went by, we heard Edmund Burke saying, "All that is necessary for the triumph of evil is that good men do nothing."

And how often have you seen this—not only in the case of individuals, but in the case of civic clubs, chambers of commerce, manufacturers associations—yes, colleges and universities, if you please.

To sum up the national prospects for socialized medicine:

Except for a minute percentage of the Congress, and possibly a slightly larger section of the public, there is no demand now for a broad program of socialized medicine.

But, gradually, the Federal Government is moving deeper and deeper into the medical picture. Some of these advances are undoubtedly necessary, generally beneficial, and are no threat whatever to the private practice of medicine and the best interest of the patient.

Others are an integral part of socialized medicine itself. It is our responsibility to our patients and our profession to remain on the alert. We must learn to distinguish between what is sound medical progress on a broad scale and what is socialized medicine.

THINK ON THESE THINGS, BECAUSE THE FUTURE OF OUR WAY OF LIFE DEPENDS UPON IT.

Affections of the Neck, Shoulder and Arm

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THE MOST FREQUENT REASON for seeking medical aid is pain and loss of use. This applies to the affections of the neck, shoulder and arm. We will discuss in order of frequency as seen in the general practitioner's office the various conditions causing pain in the neck, shoulder and arm.

MYOSITIS OF THE NECK ("CRICK" IN THE NECK)

Half of these patients have a history of unusual activity or trauma. This unusual activity may be repeated activities or a single injury or a strain such as being struck from behind while sitting at a stop light. There may be a history of being chilled or sitting in a draft. Pain is relieved by rest or aggravated by activity and may radiate as a referred pain into the shoulder or even down into the arm.

The main finding is pain on pressure over the neck muscles and limitation of motion. A neurological test is negative and vertex pressure downward on the head with the head held normally will not reproduce any of the pain.

The treatment depends upon the severity of the attack. Mild cases will respond to relative rest with salicylates, or severe cases may require partial rest with traction. We prefer to use intermittent traction with pull up to seventy-five pounds 20 minutes three times a week. This is given in the office. Very few of these cases require hospitalization for traction. Local heat is frequently very helpful.

COSTOSCAPULAR SYNDROME

This is a myositis or fascitis of the muscles attached to the upper inner angle of the scapula, primarily the trapezius muscle. There may or may not be a history of trauma and frequently in these cases we have had no history of trauma. The chief complaint is usually pain in the shoulder, down the arm and sometimes around the chest. The pain may extend all the way to the fingers with complaint of numbness and tingling. Many of these patients give a history of occupations requiring the hands to be extended in front of the body for prolonged periods. This condition is frequently referred to and even diagnosed as a "ruptured disk". Frequently the complaint area is not the area of maximum tenderness.

Examination usually reveals a trigger area at the upper angle of the scapula approximately two inches in diameter, it may be larger or smaller. Pressure over this trigger area reproduces the patient's pain, causing pain to be referred down to the arm below. A close proximity to the brachial plexus apparently is instrumental in the referred pain down the arm. There is no direct pressure on the brachial plexus. X-rays are usually negative. Neurological examination and vertex head pressure are always negative with the exception that there may be some ill defined numb areas in the lower arm and hand.

This condition responds very well to injection with Hydrocortone. I have found that mixing two and one-half ccs. of Hydrocortone in a ten cc. syringe of 1% Novocaine gives a maximum distribution of the Hydrocortone. It is helpful to give immediate relief of symptoms and has a substantiating diagnostic value as to the trigger zone as well as therapeutic value. I inject this into the bursa that I am able to outline by firm palpation as the trigger zone of the condition. This occasionally requires several injections. Overhead pulley exercises are beneficial in the follow up care. A very convenient pulley is located in most homes in the form of a rod on which the shower curtain slides. Instruct the patient to place a stool near to the shower and use some cloth material, old neckties or sheeting, as a pulley mechanism over the shower rod. Use the good hand to pull the painful extremity upward in all directions, forward, sideways and backward. If the shower rod is not available, an overhead pulley exercise apparatus should be arranged. Following injections, these patients are frequently relieved by cold applications.

BURSITIS OF THE SHOULDER

The subdeltoid bursa may be involved in acute or chronic processes and the history involves trauma in only approximately 50% of the cases. In these cases it may be repeated activities or a single trauma. In the acute cases the pain is severe and disabling and the patients usually present themselves with marked muscle spasm and a protective attitude toward the arm and shoulder. Heat will frequently aggravate the symptoms. In a chronic case, the most frequent complaint is night pain, inability to sleep

and a low grade pain during the daytime. The most frequent site of pain as stated by the patient is at the insertion of the deltoid or a point even lower in the humerus, this being the spot to which the pain is referred.

Examination reveals varying tenderness in the subdeltoid bursa area, just lateral to the acromion or at times lateral to the coraco-acromial ligament. However, the palpating fingers will convince the patient that the true site of the complaint is in the subdeltoid bursa area. This may require rather vigorous palpation in the chronic cases. Inability of women to reach the brassiere snaps is a frequent complaint in chronic cases and this limitation of motion can be demonstrated clinically. There is usually some limitation of motion even in the chronic cases if a careful examination is performed, especially loss of abduction.

Those cases following trauma present more of a diagnostic problem. The Novocaine injection test has very definite beneficial therapeutic value but is particularly helpful in diagnosing the underlying pathology. Ten to fifteen c.c. of 1% Novocaine is injected throughout the tender area until the pain is obliterated. Following the obliteration of pain there are three possible interpretations of the test. One, if there is a full active and passive range of motion, one can be reasonably sure that the primary condition is inflammatory bursitis (there is no significant tear of the musculotendinous cuff). Two, if the patient's arm cannot be actively raised to its full extent following complete relief of pain but can be passively raised by either the patient or the physician, this is strong evidence that there is a rupture of the musculotendinous cuff. Three, if following relief of pain the shoulder remains markedly limited to both active and passive motion and if the scapula tends to ride up on any efforts at abduction, one can be reasonably sure that there is a periarthritis with resulting adhesions (frozen shoulder). This latter is more likely in the chronic cases.

Care should also be taken to differentiate between pain in the acromioclavicular joint and the subdeltoid area.

X-rays reveal calcium to be present in only 50% of the cases and calcium is frequently present in shoulders that have never had any symptoms of bursitis.

Vigorous exercises of the overhead pulley sort previously described may relieve the symptoms sufficiently in persons of great fortitude. Preferable treatment is the injection of the area with approximately ten ccs. of Novocaine followed by two ccs. of Hydrocortone, making sure that at least one cc. gets into the bursal area and another cc. into the bicipital tendon groove immediately under the bursa. This must be followed immediately by the above described exercise regime and for the first twenty-four hours we use ice applications with liberal sedatives and anodynes.

At the time of injection with Novocaine we frequently make an effort with a larger needle to aspirate calcium if present. There does not seem to be any relationship between the success of this maneuver and the success with the injection treatment.

The above described treatment will relieve 95% of the cases but may require one or more injections with Hydrocortone. Diathermy is of no value. X-ray therapy will relieve approximately 80% of those cases in which calcium is shown to be present. Surgery is rarely indicated in our cases but when indicated I feel that very careful exploration of the bursa and its floor with the musculotendinous cuff should be performed. The bicipital groove should be opened and inspected. If there is any impingement of the acromion and the acromiocoracoid ligament, I frequently detach the coracoacromial ligament from the acromion to allow more space for the musculotendinous cuff and greater tuberosity to ride under the acromion in abduction. Any calcium that is present is carefully removed.

PERIARTHRITIS OF THE SHOULDER (FROZEN SHOULDER)

This condition is frequently a complication of a painful arm or shoulder or even cardiac conditions requiring prolonged disuse of the shoulder joint. The pathology present is usually adherence of the capsule of the shoulder joint to parts of the musculotendinous cuff and adherence of the bursa. There is also usually some adherence of the biceps to the overlying musculotendinous cuff and also to the bicipital groove.

The diagnosis can be made as noted above and initial treatment should consist of injections of Hydrocortone into the bicipital groove in the shoulder joint and bursal area with vigorous overhead exercises and forced efforts at manipulation. If progress is not satisfactory, the pain is not relieved and motion is not restored sufficiently, these frequently require multiple manipulations under anesthesia followed again by vigorous overhead exercises. In the extremely refractory cases we may do an open operation and transplant the bicipital tendon to the coracoid. This has been rarely necessary in our cases.

TEAR OF THE MUSCULOTENDINOUS CUFF

This rarely occurs in young adults, but usually after age forty-five. There is a history of trauma and the patient frequently states that he hears a snap or pop. He may present himself completely without pain but with an inability to abduct his arm in one or more planes. However, initially there is usually a moderate amount of pain and swelling and the above described Novocaine test is helpful in diagnosing the condition. After one has injected a number of shoulders it becomes apparent when the needle does not go into the musculotendinous cuff after passing through the deltoidal region but drops immediately down onto the head of the humerus, this is strongly suggestive of a ruptured cuff along with the other signs and symptoms.

If these patients are seen within one to eight weeks, they should be repaired surgically by reapplying the musculotendinous cuff to a denuded area of bone in front of the tuberosity, holding it in place through tunnels in bone using either stainless steel or silk sutures. This procedure is facilitated by removing the acromion to obtain exposure. We use the sabre incision and discard the tip of the acromion to allow for earlier activity. The arm is held in a side arm splint for four to six weeks and gradual activity is started thereafter. In late cases the patient has frequently made sufficient substitution of other muscles about the shoulder to perform his everyday activities. A decision concerning surgery in these cases can be reached only after careful consideration of the individual and his occupation. In these late cases, if surgery is done, one is rarely able to approximate the musculotendinous cuff to its original location. The tear must close and lie side by side.

RADIOHUMERAL TENDONITIS (TENNIS ELBOW)

This is an inflammatory condition of the conjoined tendons of the extensors of the wrist usually located at the origin of the tendon from the lateral epicondyle of the humerus. This is frequently aggravated by repeated motions of extension in the wrist. A very high percentage of these cases have a history of repeated minor trauma. The presenting complaint is usually an inability to pick things up, inability to open doors and pain on pressure in the region of the epicondyle of the humerus. Examination reveals varying degrees of tenderness and may at times actually show local heat. Efforts at dorsiflexion of the wrist against resistance reproduce pain. Pressure over the epicondyle and the head of the radius reproduces pain.

These patients will usually respond to Hydrocortone injected into the tender area and may on occasions respond to relative rest for a period of two to three weeks.

TENOSYNOVITIS OF THE WRIST

The most frequent type of tenosynovitis found in the wrist is stenosing tenosynovitis of the extensors of the thumb (Dequervain's Disease). In this condition the swelling of the tendons and the fascial sheath at the distal end of the radius is such that there is a friction and an inflammatory process. This may be spontaneous in origin but more often there is some history of repeated trauma, frequently occupational. Some of these cases also have accessory tendons and occasionally one is noted with a cyst of the tendon sheath. The history most frequently is of inability to squeeze tightly, weakness of the thumb, inability to pick up objects and tenderness over the base of the thumb.

Examination reveals extreme tenderness over the constricting band of fascia at the distal end of the radius. There may be crepitation. Forced movements of the thumb reproduce pain. Many of these cases respond to rest but frequently it is necessary to inject the area with Hydrocortone. Unless the occupation can be changed, it may be necessary to release the overlying fascia with surgical intervention. Care should be taken to avoid the cutaneous branch of the dorsal interosseus nerve as it immediately overlies the operative site. This should be identified in all surgical procedures in this region. The surgical procedure can be performed very satisfactorily under local anesthesia and has a very brief period of disability.

NERVE ROOT IRRITATION

In view of the motion in the neck and its vulnerability to injury there frequently arise causes for nerve root irritation. Any changes in the facet joints or in the lateral intervertebral joints of Luschka may decrease the size of the intervertebral foramen sufficiently to cause nerve root pressure with direct pain. Also the recurrent meningeal nerve may be irritated sufficiently to cause referred pain. The changes which may bring about this nerve root pressure are the result of trauma, arthritic involvement, degenerative changes of old age, partial luxations of facet joints with resulting muscle spasm.

One of the most frequent causes of nerve root irritation is the result of an individual being struck

from behind while sitting in a car. The car which strikes the stationary car has complete liability for all damages to both vehicle and person. At the time of the impact, when one car strikes a stationary car, the weight of the head is thrown forward and backward in rapid succession. As the individual is unprepared for these motions, the neck may receive any injury from the most minor sprain to a very severe sprain and tearing of tissues with resulting edema and nerve root pressure. Rarely one may observe a fracture in the region of the facet joints as a result of this type injury. Nerve root pressure will reveal varying degrees of neurological changes in the arm with numbness corresponding to the roots involved. The most frequent nerve roots involved are five, six and seven. There may also be other neurological changes in old chronic cases, such as atrophy and wasting. Neck motion is usually limited by spasm. Vertex pressure downward on the head when it is held immobile often reproduces the pain when there is nerve root pressure. The long cord symptoms are absent in true nerve root pressure. The severity of these cases varies considerably and there appears to be no relation between the objective findings and the subjective complaints, especially in those with whom litigation is a problem (Legal Mortis). X-rays should be made routinely but frequently are negative. They may show some loss of the normal cervical curve and this is consistent with muscle spasm and is important if the patient exhibits muscle spasm clinically. These patients frequently have headaches for long periods of time but not neurological evidence of intracranial injury.

Treatment depends upon the symptoms. Some cases respond to relative rest and Aspirin and the symptoms subside in two to three weeks. In others, complaints continue for months and if in the beginning it can be determined that there is moderate muscle spasm, one should be very vigorous in early treatment with intermittent traction of seventy-five pounds at least three times a week and in some serious cases daily. I believe that initial vigorous treatment may prevent some of these prolonged symptom complexes. We also use large doses of salicylates and in view of the chronicity of these cases, avoid narcotics as much as possible. Frequently these cases are severe enough to be hospitalized with continuous traction in bed, fifteen pounds supplemented by intermittent heavier traction.

Very rarely symptoms of nerve root pressure persist in spite of conservative treatment and x-rays may reveal considerable encroachment on the intervertebral foramen between the lateral intervertebral joint and the facet joint. If this persists in a rare case it is advisable to decompress the nerve posterially but make no effort at rolling the cord or getting underneath the nerve as frequently this type of surgical intervention produces symptoms and signs greater than existed prior to surgery.

RUPTURED DISK

A true ruptured disk is almost invariably found in the midline in the cervical region and produces marked long cord symptoms with involvement of the long tracts of the spinal cord. These cases are a neurological emergency and require surgery for decompression in a high percentage of cases. In the absence of long tract symptoms, however, we feel that any neck complaint should be treated conservatively and if surgery is need, it should be only a posterior decompression of the intervertebral foramen with no effort involving the disk or moving the cord during the surgical procedure.

Other painful conditions of the neck include the arthritides, tuberculosis, malignancy of bone and cord and torticollis.

In these conditions, treatment of the underlying disease must of course be combined with local treatment as indicated.

CONGENITAL CONDITIONS OF THE NECK

Spasmodic torticollis in adults is notoriously refractory to treatment. Frequently the spasm is central in origin and it is difficult to correct even with sectioning of the main nerve roots.

Congenital torticollis resulting from contracture of the muscles of the neck, particularly the sternocleidomastoid, should be observed early and treated at the age of one or two years with surgical release of the contracture preferably at the clavicular end of the sternocleidomastoid. It may also be necessary to release fascia at other muscle structures with extreme care to avoid injury to the subclavian vessels. When the sternocleidomastoid is released at the mastoid end of the muscle, extreme care must be used to avoid injury to the spinal accessory nerve. The former procedure is preferable. Following release of the contracture, the head must be held at an over-corrected position for six to eight weeks and this is followed by exercises for a period of a year or two to avoid recurrence.

Sprengel's deformity of the shoulder is a congenital elevation of the scapula. Treatment of this

is indicated only on the basis of the cosmetic effect. Occasionally these patients have sufficient deformity to require surgical release of the scapula from its attachments, lowering it on the chest wall. If this is done, it is necessary to firmly anchor the scapula to the rib cage with silk or stainless steel suture in order that it not rise to its formerly deformed position.

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Transfusions in 1956

More than 4½ million blood transfusions were given to nearly 2 million Americans during 1956, the Joint Blood Council, Inc., has estimated.

Approximately 5 million pints of blood were collected through various agencies during the year, a post card survey of American hospitals showed.

The project advisory committee of the Joint Blood Council reported the survey in the November 2 Journal of the American Medical Association. The committee based its figures on a sample that covered an estimated 78 per cent of the blood used in the United States during 1956.

The survey showed that hospitals obtaining blood from voluntary unpaid donors provided a surprisingly large share of the blood used. They collected 36 per cent, as compared with 38 per cent collected by regional American Red Cross collection centers.

Other sources and their percentages were: commercial blood banks, 11 per cent; non-hospital community blood banks, 9.5 per cent; hospitals that furnish blood to other hospitals, 4 per cent, and directly paid donors, 2 per cent.

The survey is the first step in a comprehensive study of the total American blood transfusion program. The council hopes the study will eventually lead to a smoothly operating and well-organized national blood program. A second survey seeking more specific details from hospitals and blood banks is now underway.

The council, a voluntary organization established in 1955, is composed of representatives from the American Association of Blood Banks, the American Hospital Association, the American National Red Cross, the American Society of Clinical Pathologists, and the A.M.A. These organizations are all concerned with procuring, processing, preserving, and distributing blood and blood derivatives.

The council's objective is to co-ordinate all activities in this field, including the interchange of blood, the standardization of cross-matching and typing procedures, the accreditation and inspection of blood banks, the stimulation of blood donor campaigns, and the encouragement of research.

President of the council is Dr. Leonard W. Larson, Bismarck, N.D., a member of the A.M.A. Board of Trustees. Dr. Frank E. Wilson, Washington, D.C., is executive vice president and secretary of the council which maintains headquarters in Washington.

An editorial in the same Journal pointed out that there has been local progress in blood transfusion services, but there is an "urgent need" for the development of a national program.

"The need exists for both the physician and his patient who some day will require blood in a hurry; in the hospital which may have to get it from a transfusion service outside its own walls, and in a government which will have to know all details about machinery for mass supply of blood during a civil or military disaster."

Spigelian Hernia

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ONE HUNDRED SEVENTY TWO CASES of Spigelian hernia or hernias through the semilunar line have been reported in the English and foreign literature to date.[1-9] The *actual* incidence of occurrence is much higher because the anatomy of this hernia is little understood, and the pathology usually unrecognized. It is the purpose of this paper to clarify the anatomy and pathology, to increase the doctors' index of suspicion, and thereby to improve diagnosis, encourage early surgery and lower mortality and morbidity.

Adrian Van der Spigelius was the first to describe the anterior abdominal wall structure known as the Spigelian or semilunar line.[5] This line runs from

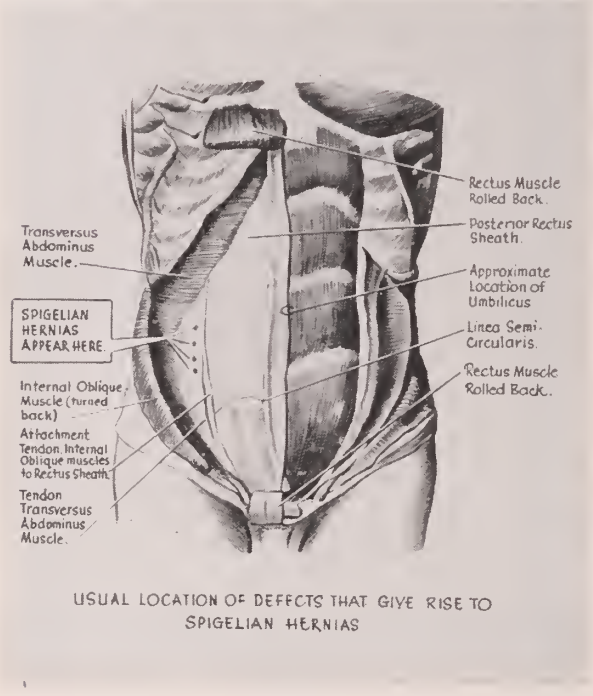


Fig. 1

the pubic bone to the costal margin between the transversus abdominus muscle laterally and the rectus muscle medially. (Fig. 1) The line is actually the fascia or aponeurosis of the transversus abdominus muscle. It is in this area that a defect occurs which forms the hernia ring of the Spigelian hernia. The defect occurs usually at or below the umbilicus in the semilunar line since the weakest area exists here.

Clinically, patients who have a Spigelian hernia complain of lower abdominal pain and a tender mass in the right or left lower quadrant. Most often this mass appears on standing and with exercise. It quickly disappears on sitting or lying down. Should the hernia sac and its contents become temporarily incarcerated or strangulated, nausea, vomiting, severe abdominal pain, and signs and symptoms secondary to obstruction may occur. A reliable history is vital in establishing a diagnosis. This is especially true since physical findings are lacking.

On physical examination tenderness is usually present in the right or left lower quadrants over the hernial ring. The ring or defect in the transversus abdominus muscle is rarely palpable since it is covered by and deep to the external and internal



Fig. 2—The area where the Spigelian Hernia mass presented is outlined. It is just below and lateral to the umbilicus.

oblique muscles. This factor makes a diagnosis difficult. In addition, the mass itself is rarely present for the clinician to see or feel. In order to definitely establish the diagnosis every effort should be made by the referring doctor or surgeon to see the patient when the mass is visible and palpable. While in service, one of the authors (J. B.) saw many patients complaining of pain high in the lower abdominal quadrant with a history of a mass or "knot" following strenuous exercise. Physical examination at the time was negative except for tenderness. The usual diagnosis of muscle strain was made. In retrospect, some of these patients may well

have had Spigelian hernias. Laboratory data and x-rays except with strangulation or incarceration and obstruction offer little help in diagnosis.

CASE REPORT

E. M. W. (60332), a 46 year old female was admitted to Leigh Hospital with a 10 year history of a symptomatic umbilical hernia. For 2-3 months prior to admission she had noted the intermittent appearance of a left lower quadrant tender mass associated with severe epigastric pain, nausea and vomiting.

Physical examination revealed a moderate sized umbilical defect (about 4 cm. in diameter) with prolapse of the umbilicus on standing. There was some tenderness in the left lower quadrant but no defect or mass could be palpated at the time of consultation or hospital admission. One of the authors (A. L.) had felt the left mid quadrant mass previously. The area where the mass had previously appeared and the area of maximal point tenderness is outlined in Fig. 2. All pre-operative laboratory data was well within normal limits. Diagnosis on admission was (1) symptomatic umbilical hernia; (2) symptomatic Spigelian hernia.

On the day after admission the patient was brought to surgery and the umbilicus was excised in preparation for the repair of the umbilical hernia. The peritoneum was opened widely and the anterior abdominal wall was palpated from within. A well circumscribed defect with a fibrous ring was present in the left lower quadrant. A finger was held in this ring and an incision was then made in the skin directly over the palpable finger. In order to visualize the defect it was necessary to incise both the external oblique aponeurosis and the internal oblique muscle. (Fig. 3). The edges of the fibrous ring were freed and imbricated with 2-0 cotton. The umbilical hernia was repaired by imbrication in the usual "pants in vest" manner. The patient's postoperative course was uncomplicated and she was discharged on her 6th postoperative day. She has had no recurrence of her mass or symptoms to date.



Fig. 3—The hand is inserted through an umbilical incision. The tip of the gloved finger is protruding through the fibrous ring forming the Spigelian Hernia defect.

SUMMARY

The anatomy of the Spigelian hernia is discussed and illustrated for the purpose of: (1) Increasing the index of suspicion; (2) Establishing earlier diagnosis; (3) Instituting earlier treatment. The importance of the history is emphasized and the lack of physical findings pointed out. Diagnosis

must be based on visualization or palpation of the elusive hernial mass by either referring doctor or surgeon. Every effort should be made in this direction. Discussion is based upon an extensive review of the literature and this case report.

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Soft Shoes for Toddlers

Soft shoes which give "barefoot freedom" to babies learning to walk were recommended in the October issue of Today's Health. It pointed out that the baby's first shoes may hold the answer to the kind of foot comfort he will have as an adult. If the baby is given "barefoot freedom," which permits the foot to develop naturally, he will probably have comfortable feet when he grows up. Because normal foot muscles become strong only through use, only a "supple foot covering that permits the utmost freedom of movement" should be worn by the infant and toddler. If the baby's foot is confined in a shoe which holds any part of it in conformity, even the heel which is usually supported, the foot will become weak and stiff, according to an orthopedic surgeon quoted in the article.

In addition, stiff shoes may handicap him in learning to walk. The article quoted one mother who said her year-old son took his first step when she put soft shoes on him. In hard-soled shoes, he "just stood there as if he were wearing skates that might topple him any minute—and they did too, for the could not bend his feet to gain his balance."

Among the recommendation were the following:

—The shoe should be "foot-shaped," with a straight inner line. It should copy the baby's foot rather than trying to confine the foot into a tiny copy of an adult shoe.

—It should be wide across the toes to permit their spreading and flexing as the child walks. There should be depth for chubby toes, a box-cut preferably, and space beyond the toes. A little child beginning to walk "grips with his toes and rotates on his heels, as he bends and turns." Soft shoes allow him to do this with ease.

—A simple tie or buckle may fasten the shoe on, but no constraining laces should be permitted to interfere with the free flexing of the arch.

—The heel may be snug-fitting, but should have no counter. Through use, the heel and ankle muscles will strengthen naturally.

—The entire shoe preferably should be made of leather, which "breathes through its open pores" and allows essential ventilation.

There are children with deformed feet or other deviation who should have corrective shoes. Their problems must be considered individually. For the child with normal feet, cover them for protection against cold or bruising, or for decoration, but let him use his feet.

Exstrophy of the Bladder

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EXSTROPHY of the bladder is probably one of the most difficult and distressing congenital anomalies encountered by the urologist. It presents a problem of even greater magnitude to the individual born with such an anomaly. Thus exstrophy of the bladder is a problem from a pathological standpoint and from a sociological one also. The individual with an exstrophy has complete urinary incontinence and lives in a constant drainage of urine upon a tender, raw, sometimes easily bleeding everted mucosa of an exstrophied bladder. This constant burden presents a very definite economical, sociological and psychological problem for the individual. The majority of these individuals expire before the age of 20, a goodly number in early childhood, as the result of repeated ascending urinary tract infections. There is a likelihood, in later life, of malignancy of the bladder.

For almost a century, many procedures have been carried out to correct the exstrophied bladder. Repair of the bladder thus establishing a functional bladder is unsuccessful. At present the procedure in greatest use is that of bilateral ureterosigmoidostomy, cystectomy and repair of the ventral hernia. Campbell states that the mortality rate, with the above procedure a number of years ago, was relatively high, 20% to 25%; however, he states that this has been considerably improved and is now 5% to 10%. Bilateral ureterocolostomy or sigmoidostomy results, in a number of cases, in obstruction to the drainage to either kidney with recurrent infections from the bowel which is one of the detriments of ureterosigmoidostomy. There is also a complication, hyperchloremic acidosis, thought to be caused by reabsorption of urine through the bowel mucosa and by renal damage.



Fig. 1—Prior to surgery. Exstrophy of bladder, ureteral orifices, vagina.



Fig. 2—Bloomers worn before surgery to catch continuous dripping urine.

The incidence of exstrophy of the bladder is low and is stated by some authors as occurring once in fifty-five thousand births.

Since exstrophy of the bladder is a congenital lesion, and the longer the presence of the lesion the higher the incidence of death, it is important that it be corrected in early infancy, that is between the ages of one and three.

CASE REPORT

Miss L. A., age 46, was admitted to Rockingham Memorial Hospital, Harrisonburg, Virginia, July 5, 1953, because of urinary incontinence associated with complete exstrophy of the bladder. She had been completely incontinent since birth and, to her knowledge, no treatment or relief was obtainable. During

her lifetime she had had several episodes of ascending urinary tract infection associated with chills and fever; however, these were not too frequent or too severe. Her chief difficulty was soreness and tenderness of the everted mucous membrane of the bladder



Fig. 3—Repair of ureteral defect. Plication of bladder musculature. Sitting position.

and the management of her urinary incontinence. By trial and error she had managed the latter with the use of clean cloths to absorb the urine which required constant changing, and were worn enclosed in plastic bloomers. The continuously dripping urine from the exposed ureteral orifices was a constant burden.

The cardiorespiratory history was normal. The gastrointestinal history revealed recent episodes of nausea with intolerance to fried, fatty foods, and occasional episodes of right upper quadrant pain resembling acute attacks of cholecystitis.

Physical examination revealed a fairly well developed, well nourished, white female. The abnormal physical findings of significance were those associated with the usual case of complete exstrophy of the bladder. There was a protruding red, everted mass involving the lower abdominal wall. Two ureteral orifices were easily visualized and, at intervals, extruded urine. There is a ventral hernia present behind the everted posterior wall of the bladder which increased in size upon increasing intra-abdominal pressure by coughing, sneezing, lifting. There is complete absence of an anterior bladder wall and complete absence of a symphysis pubis. The umbilicus is difficult to visualize and almost obliterated at the upper margin of the exstrophy of the bladder. The recti muscles are separated and extend down and laterally beside the exstrophied bladder. The clitoris is cleft and the labia minora are widely separated anteriorly to expose the vaginal orifice.

The laboratory data, upon admission: Urine—medium yellow. Neutral reaction. Sp. gr. 1.025. Microscopic examination—negative. Hemoglobin 12.56 gm. (80%). WBC—7,800 with 64% pmn. 35% s. lym., 1% mon. Platelet count 247,800. Bleeding time 2½ min. Coagulation time 6 min. Blood sugar 87. N.P.N. 41.

Preparation for surgery: Following admission to the hospital, the usual history and physical examination with laboratory tests, urine and blood examination was done. Kidney function tests were carried out along with complete upper urinary tract study by excretory urography. The upper urinary tract study is important to determine any evidence of hydronephrosis, reduplication of kidney pelves, calculi, and kidney damage. The bowel was



Fig. 4—Excretory urograms. Four years postoperative. Normal.

prepared by placing the patient on low residue diet with sterilization of the bowel by sulphathaladine, 2 gms. 4 times a day. Five days after admission to the hospital and preparation, bilateral ureterosigmoidostomy was done. The peritoneal cavity was opened, the patient placed in a Trendelenburg position, the bowel retracted into the upper abdomen exposing the pelvic contents. The parietal peritoneum was excised over the right ureter. The ureter was dissected free downward as close as possible to the ureterovesical junction. The latter was clamped and severed. The distal end was ligated with "O" chromic catgut. The proximal end of the ureter was dissected free with sufficient length so that it might be implanted as low as possible into the rectosigmoid without tension. A similar procedure was carried out upon the left ureter. The right ureter was implanted into the rectosigmoid at a lower point than the left. Both ureters were implanted into the rectosigmoid by incising the serosa muscularis of the bowel in line with the tenia. A trough was made by dissecting the muscularis serosa laterally. The ureter was then laid in the trough and in the distal end of the incision, a stab wound was made through the mucosa of the bowel. The severed ureter was then threaded through the stab wound into the bowel. The serosa muscularis were then repaired without traction and constriction over the ureters. The peritoneum, recti muscles and abdominal wall was closed anatomically with no drainage. For 3 or 4 days postoperatively, the urinary output was followed by means of a rectal tube lying just inside the anal opening. Postoperative antibiotics consisted of penicillin and streptomycin. Parental therapy consisted of adequate intravenous fluids for several days postoperatively until peristalis was audible. Patient was then placed on liquids and diet. The postoperative course was uneventful and the patient was discharged from the hospital July 25, 1953. Follow-up examinations included blood chemistries which were reported as normal. The patient developed acute cholecystitis with cholelithiasis, and a cholecystectomy was done in June 1954. The course was uneventful.

Miss L. A. was re-admitted to the hospital, February 10, 1955, at which time the exstrophied bladder and ventral hernia were repaired. The repair of the hernia and exstrophy of the bladder were carried out by removing mucous membrane by sharp dissection from the bladder musculature. The remaining bladder musculature was then plicated with "O" chromic catgut and everted, giving a good anterior supporting abdominal wall. Counter incisions were made laterally through the skin and subcutaneous tissue, and the plicated bladder musculature was covered with the skin of the lower abdomen. The counter incisions were allowed to granulate in. This patient's course, following bilateral ureterosigmoidostomy and repair of exstrophied bladder, has been uneventful. Her blood chemistries have remained normal. There has been no evidence of hyperchloremic acidosis.

August 15, 1956, excretory urograms were done and appeared normal.

November 7, 1956, the following laboratory work was done: RBC-4,280,000. Hemoglobin 88% (13.5 gms.). WBC—3,950. 41 polys. 57 lym. 2 eosin. Fasting blood urea 36 mgm. Blood potassium 5 milli eq. Sodium 138 milli eq. Chlorides 520 milli eq.

SUMMARY

Congenital exstrophy of the bladder presents a difficult problem in management. Many types and methods of diverting the urinary stream in these cases has been devised and carried out. No method has been without its dangers and complications.

The above is a four year follow-up of the treatment of a patient with congenital exstrophy of the bladder. The treatment consisted of bilateral ureterosigmoidostomy, similar to the Coffy and McIver technique. The bladder defect was rather simply taken care of by dissecting the bladder mucosa from the bladder musculature. The bladder mucosa was then plicated and used to repair the ventral hernia.

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The Surgical Treatment of Bilateral Abductor Paralysis of the Vocal Cords

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BILATERAL ABDUCTOR PARALYSIS of the vocal cords is an incapacitating condition. In fact the inability to open the laryngeal glottis voluntarily projects the victim to the precarious edge of suffocation for as long as the condition remains uncorrected.

By far the most common cause of bilateral abductor paralysis is injury to the recurrent laryngeal nerves associated with surgery of the thyroid gland. Other less common causes are acute trauma, the effects of bulbar poliomyelitis, and ankylosis of the arytenoid cartilage. Once this unfortunate condition exists, it can be remedied with the following objectives in mind.

I. The creation of an adequate airway.

II. The maintenance of an acceptable voice.

Efforts towards this have been by surgical procedures attempting a reduction of the approximation of the paralyzed adducted vocal cords in the midline. Such surgery was first attempted on roaring horses, a roaring horse being one with paralyzed vocal cords and which consequently makes a roaring noise on the slightest exertion. Later followed various attempts on humans. The approach initially was by means of midline laryngotomy and removing the arytenoid cartilage. In the late 1930's Brian King[1] developed an operation which was a significant step forward. He employed the external laryngeal approach through the lateral neck. His technique consisted of:

I. Detaching the arytenoid cartilage from its articular facet on the cricoid cartilage and displacing it lateralward.

II. Attaching the innervated severed end of the omohyoid muscle to the muscular process of the arytenoid.

III. Securing these two to the ala portion of the thyroid cartilage.

Morrison[2] in a later work showed that the omohyoid attachment had no appreciable effect in developing motion in the operated cord.

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In 1943, Dr. Joseph Kelly[3] popularized the operation of the window procedure. Using a lateral approach he resected a 2 x 2 centimeter square of cartilage through which the arytenoid cartilage was removed. In the late forties, William Thornell[4] reported an intralaryngeal method of removing the arytenoid cartilage using the Lynch suspension laryngoscope. Using especially constructed laryngeal instruments he was in three cases able to resect the arytenoid cartilage. He then applied a cautery to the vacated perichondrial capsule creating scarring to draw the cord lateralward. Comparing this technique to that of the open approach methods it would appear that the advantage of avoiding additional scarring to the skin of the neck would be outweighed by the following disadvantages:

I. Intricate technique required for operating through a laryngoscope.

II. The necessity of especially constructed instruments.

III. The dependency on scarring alone from cautery to produce the eventual widening of the glottis.

In 1946, DeGraaf Woodman[5] modified the Brian King operation so that now the procedure is technically easier to accomplish and appears to produce results equally as good. For the sake of clarity, this technique will be reviewed with illustrations.

Figure #1 demonstrates superior views of the larynx. The top drawing shows the typical picture of a larynx which has been affected by bilateral recurrent nerve paralysis. A person can exist with this minimal airway but only with difficulty. The slightest exertion results in marked air sucking and breathing effect producing a weird crowing sound. The lower drawing in (figure #1) represents the appearance of the larynx that is preferred following surgery, a good 4 millimeter aperture. A wider opening results in loss of phonation power. A smaller opening results in residual dyspnea.

TECHNIQUE

The 4 millimeter widening of the glottis is accomplished by the following steps. A skin incision

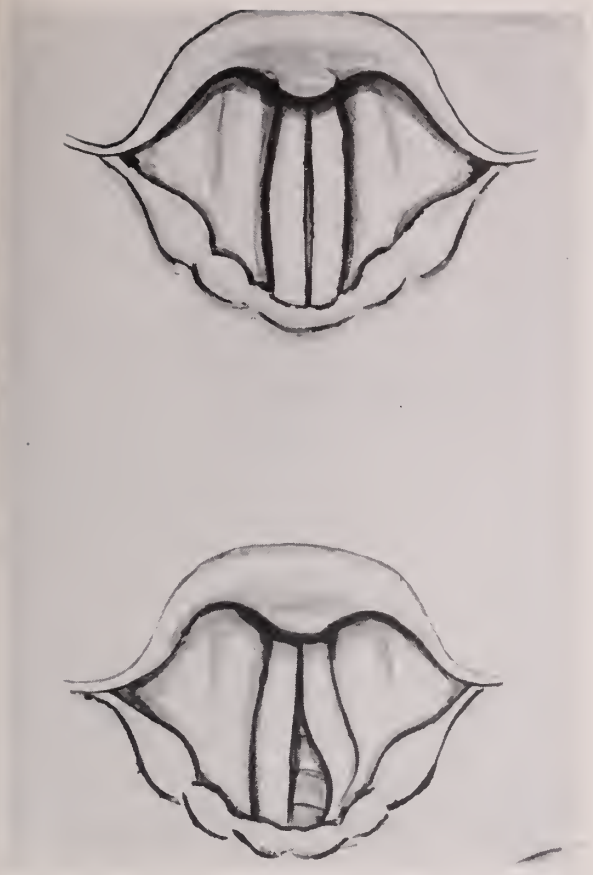


Fig. 1

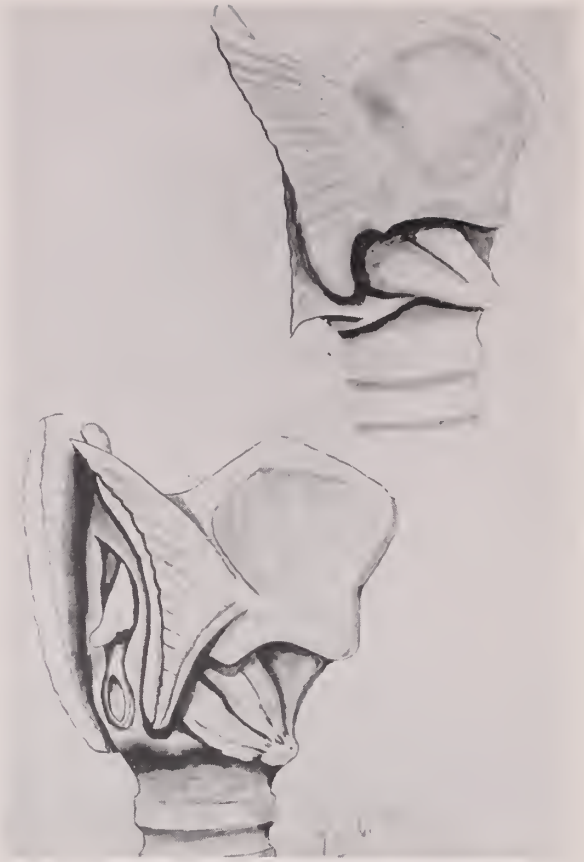


Fig. 2

is made at the anterior border of the sternocleidomastoid muscle at the level of the thyroid cartilage and the extrinsic musculature of the larynx is exposed.

In figure #2 the essential landmarks are demonstrated. The first to be noted is constrictor pharyngeus inferior muscle as it passes the posterior edge of the thyroid lamina. At the inferior edge of this muscle the second structure of importance is found, the articular facet between the inferior cornu of the thyroid cartilage and the cricoid cartilage. The articular junction is described by Woodman as the key landmark in the operation. In the bottom illustration of figure #2, the joint is disarticulated and the constrictor muscle has been divided at the posterior edge of the thyroid cartilage. Thus the thyroid lamina is released so that it can be retracted forward exposing the area where one must seek the arytenoid cartilage. Once again referring to the bottom illustration in figure #2, the arytenoid cartilage may be seen being dissected free from its perichondrial bed.

Figure #3 illustrates the final phases of the procedure. The top drawing in this figure shows that the bulk of the arytenoid cartilage has been removed but care has been taken to leave the vocal process through which a 3-0 atraumatic chromic catgut suture is being passed. Thus the operator has control of the vocal cord and can abduct it to the desired position. In the lower drawing in figure #3, a means of anchoring the cord, fixing it to the ala of the thyroid cartilage is shown. This is accomplished by passing the gut through a small drilled hole in the thyroid lamina. Before tying the securing portion of the knot, the exact position of the cord is checked by direct laryngoscopy. This entails extubating the patient and after visualization, reinserting the tube for the completion of surgery. The wound is then closed and as a final procedure, a tracheostomy is done prior to the removal of the endotracheal tube.

ANESTHESIA

Discussion of this procedure cannot permit the omission of the part anesthesia plays in the success of the operation. In preparation for surgery, little or no pre-operative sedative is given if a previous tracheostomy has not been done. Sodium pentothal and a muscular relaxing agent are given simul-

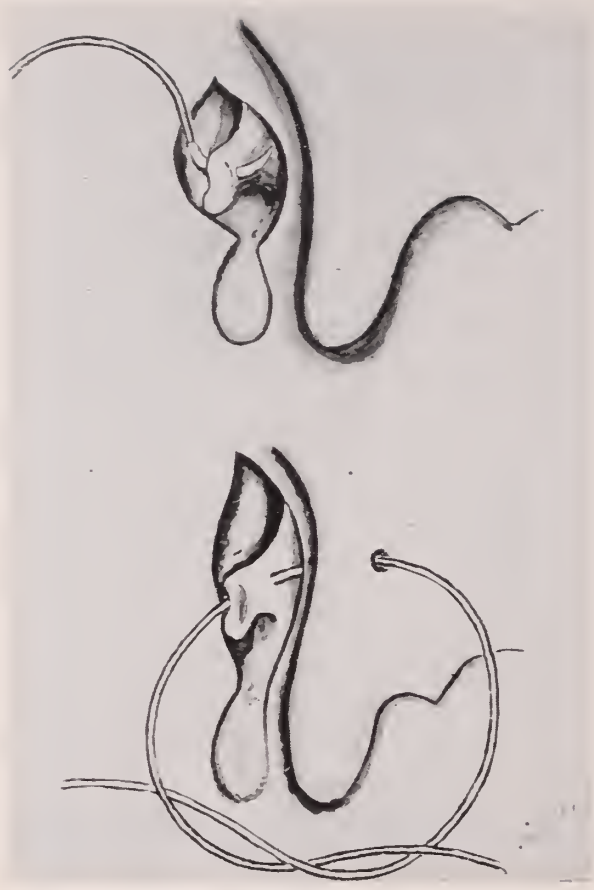


Fig. 3

taneously and the patient is rapidly and carefully intubated. Proper timing here is of the utmost importance. The endotracheal tube in addition to maintaining an airway serves a unique purpose in semi-fixation of the arytenoids outwardly so that, on the operated side, the one arytenoid is more readily palpated when that phase of the operation is reached.

The following is a summary of three arytenoidectomies performed at the Medical College of Virginia Hospitals and The Richmond Eye, Ear & Throat Hospital using the previously described Woodman technique.

The first is that of a 35 year old colored female who was unable to breathe without a tracheostomy tube. She was a deaf mute and therefore consideration of phonation was not a factor. Thyroid surgery had been done on two occasions. Oddly her dyspnea did not commence until 2 to 3 months following the last thyroidectomy. At the onset of the dyspnea, an emergency tracheostomy had been done. Extubation had not been accomplished due to the adducted vocal cords. An arytenoidectomy was done in August of 1954. Six days post-operatively indirect laryngoscopy revealed a 4 to 5 millimeter abduction aperture as a result of the surgery. She was discharged nine days postoperatively with the tracheostomy canula completely blocked but remaining in place to give the patient a psychological feeling of security. Two months later, removal of the canula was accomplished and closure of the tracheostomy fistula was carried out. The patient was discharged from our care breathing without dyspnea.

The second case is that of a 30 year old white male whose chief complaint was shortness of breath and consequent inability to carry on his livelihood as a farmer. This condition had persisted since thyroidectomy two years previously. In November 1954, a right arytenoidectomy followed by tracheostomy was done. It was not until the tenth post-operative day that his tracheostomy canula could be removed. The patient was discharged on the eleventh post-operative day and has been leading a normal life as a farmer with an improved voice.

The third case is that of a 65 year old white female who had the chief complaint of incapacitating dyspnea and hoarseness following thyroid surgery two years previously. The dyspnea was becoming progressively worse. Four weeks prior to arytenoidectomy she had been on the verge of needing an emergency tracheostomy when hospitalized with an upper respiratory infection. It was this alarming experience with near suffocation that motivated her to undergo surgery. A right arytenoidectomy followed by tracheostomy was done in December of 1956. This case differed from the other two in that she could be extubated 4 days after surgery and was discharged from the hospital in only seven days, as compared with ten for the first case and eleven for the second. In this last case, Chymotrypsin*, an enzymatic agent which is said to counteract edema of soft tissue injury, was used. It seems likely that the morbidity was lessened here by the use of Chymotrypsin. This elderly lady now has no residual dyspnea and has a vastly improved voice.

SUMMARY

A brief history of the development of surgery for bilateral abductor paralysis has been reviewed. A technique (Woodman) for arytenoidectomy has been illustrated. Three case reports are presented as successful attempts in the treatment of abductor paralysis of the vocal cords, e.g.—the creation of an adequate airway and the maintenance of an acceptable voice.

* Trade name: Chymar.

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Accident Cases in Hospitals

Accidents account for about 7 per cent of all cases treated in American hospitals, according to a new survey by the American Medical Association. Accidents combined with pregnancy, the "other great nondisease category," account for about one-fourth of the total hospital load, according to an editorial in the October 19 A.M.A. Journal. Many people believe that all patients are hospitalized for disease.

The study on accidents, prepared by the A.M.A. Bureau of Medical Economic Research and reported in the current Journal, is part of a comprehensive survey of medical services given to the American people. The accident study was based on information about patients discharged from 6,000 general and special hospitals during November, 1955. Tuberculosis and mental hospitals were excluded from the study.

The 128,000 patients hospitalized because of accidents comprised 6.9 per cent of all patients discharged during the month. The average hospital stay for accident patients was 10.7 days as compared with 9.1 days for non-accident patients. The accident cases required the use of 50,500 beds, or 6.7 per cent of total beds available.

The personnel devoted to the care of accident cases totaled 68,200 or 6.7 per cent of total personnel, and the annual hospital payroll expense was 198 million dollars, or 7.3 per cent of the total payroll.

Depending on the criteria used for the measurements, the bureau concluded that the treatment of accident cases accounts for 7 to 8 per cent (6.7 to 8.1 per cent) of the burden of American hospitals.

Presumably the burden on physicians falls within the same range; however, that will be estimated in another study.

The study also showed the following:

—The 128,000 accident patients spent a total of 1,370,000 days in the hospital, or 8.1 per cent of the total days spent by all patients discharged during the month.

—Of the accident patients, 65.2 per cent were males and 34.8 per cent females. Of the males, 11.3 per cent were under 15 years of age; 35.6 per cent in the 15-44 age group; 13.1 per cent in the 45-64 age group, and 5.2 per cent 65 years and over. Of the females, 5.8 per cent were under 15 years of age; 12.4 per cent in the 15-44 age group; 8.6 per cent in the 45-64 age group, and 8 per cent 65 years and over.

—During the reporting year (ending Sept. 30, 1955 for most hospitals), the care of accident victims cost 311 million dollars, or 7.4 per cent of the total annual expenses of the hospitals. The report noted that the total for 1957 "presumably" involved many more millions of dollars.

Gastrointestinal Polyposis with Mucocutaneous Pigmentation

(Peutz-Jeghers Syndrome)

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OCCASIONALLY patients present themselves with rare disease entities which can be diagnosed at a glance if the condition is suspected. Such a disease is gastrointestinal polyposis with mucocutaneous pigmentation. Recently two excellent reviews[1,2] have appeared in the literature summarizing the previously reported cases. This case was submitted because such a family exists in the State of Virginia and because the possibility that members of this family may be under treatment at the present time without the exact diagnosis being suspected.

A forty-five year old white male was initially seen in the physician's office, June 25, 1957, complaining of pain in the left upper quadrant. The patient was noted to have a peculiar pigmentation about the lips during the taking of the history. He stated that the present episode of pain had been present intermittently for three weeks.

There had been no vomiting, nausea or diarrhea. He had noted no change in bowel habits or tarry stools. A past history revealed that the patient has been operated upon on two previous occasions, once when a child of six and again while in the armed forces at the age of thirty-five. On both occasions the patient stated that he had suffered several days prior to surgery. The patient also gave a past history of being operated on nine times for nasal polyps and having received numerous allergy tests and treatments for nasal allergy.

Operative notes from the first operation, dated November 7, 1931, were then obtained and it was learned that the patient had been treated for intussusception and at operation multiple polyps of the jejunum had been found. It was noted that a G. I. series taken at that time had failed to show the presence of any polyps. History obtained by the attending physician stated that there had been a mass protruding from the rectum which the patient had replaced. Operative record of the second hospitalization during his stay in the armed services was not obtainable. The condition was not suspected at the time of admission to the armed services.



Fig. 1

The patient has five children, three boys and two girls, none of whom show any evidence of pigmentation, and none of whom have had abdominal discomfort. He has five half-brothers and two half-sisters all of whom apparently are well without any history of pigmentation or abdominal operation. He has one cousin who has been operated on for intestinal polyps in 1957. The patient's mother expired from cardiac pathology and the patient's father's chart failed to reveal the cause of his fatal gastrointestinal hemorrhage. A G. I. series was performed and found to be negative. No post-mortem could be obtained on the father.



Fig. 2

Physical examination revealed an extremely healthy appearing white male. Clustered about the lips at the mucocutaneous junction and in the mouth were numerous dark freckled appearing areas. Characteristically freckles were not distributed about the face. The patient stated that his upper lip had had numerous such areas of pigmentation which had disappeared. Examination of the remainder of the skin failed to reveal any further areas of pigmentation. The hand and rectum were particularly noted and no changes were found. Chest examination was entirely normal. Abdominal examination and rectal examination were also normal. There was no pigmentation noted on the patient's scrotum.

The patient's laboratoy data revealed a normal blood count and urinalysis. The electrocardiogram was normal. A G. I. series was performed and revealed the small bowel to be extremely active; no polyps were present in the stomach. One polyp measuring more than 1 cm. was present in the proximal jejunum and a second of the same size in the mid-ilium. Two smaller ones were seen in the mid-jejunum. Barium enema was performed and revealed the presence of one large polyp in the region of the hepatic flexure. A cystogram failed to demonstrate any polyps. The patient was treated with an antispasmodic and reassurance. The episode of pain disappeared promptly. It was felt that this episode was associated with his intestinal polyps.

DISCUSSION

This patient represents a typical case of Peutz-Jeghers Syndrome or gastrointestinal polyposis with



Fig. 3

mucocutaneous pigmentation. The important features of the syndrome are outlined in the above case. Approximately sixty cases have been reported to



Fig. 4

date over the past sixty years. It has been found to have a world wide distribution, cases being reported in English, Hungarian, Scottish and Nigerian. These cases apparently very frequently developed intestinal obstruction and intussusception.

On occasion, as soon as one intussusception is reduced, a second occurs even during the course of the operation. From a study of the other cases it was felt that true malignant degeneration of the polyps does not occur. Severe bleeding from intestinal polyps has been reported. The important feature is the occurrence of intussusception which very frequently will reduce itself. Treating the patient conservatively with gastric suction and enemas plus intravenous feeding, has been found to be of value. It is felt at present, that should operation be undertaken, resection of intestinal tracts with polyposis is contraindicated because it is unlikely to give any permanent benefit. The surgeon should either reduce the intussusception with removal of the polyps involved or he may undertake to explore the entire gastrointestinal tract resecting as many of the growths as possible. Since these growths occur in crops, recurrences can be expected. Nasal polyps have frequently been associated with this disease.

SUMMARY

Reported above is a case of Peutz-Jeghers Syndrome. The main features of the disease are outlined.

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121 South Market Street
Petersburg, Virginia

Carbon Monoxide

Blood

Carbon monoxide in blood gives to it a bright cherry-red appearance (carboxyhemoglobin).

Dilute one drop of blood with about 15 ml. of water so that solution is now a faint pink. Add five drops of 20% sodium hydroxide, quickly shake and observe the color. If the blood contains less than 20% carboxyhemoglobin the pink color will *immediately* on shaking, turn to a straw-yellow. If the pink color persists for several seconds or more this indicates the presence of carboxyhemoglobin in excess of 20%. However even in high concentration this also (within 1-2 minutes) will turn to a straw-yellow color. The intensity of the pink color and its persistence before turning yellow, gives a rough approximation of the concentration.

This test is specific for carbon monoxide.

Carbon Monoxide Poisoning

SIDNEY KAYE, Ph.D.
Richmond, Virginia

HISTORY

CARBON MONOXIDE became a poison when man first started to make fires in enclosed spaces. With the arrival of the combustion engine and the use of commercial gas, it has become the second most common cause of death due to poisoning. (Alcohol is the first.). Last year in Virginia, there were forty-two (42) deaths attributed to acute carbon monoxide poisoning. Its rate appears to fluctuate during the seasons, with its highest toll during the winter months.

Most mild cases of carbon monoxide exposure go unrecognized with an uneventful recovery.

PROPERTIES

Pure carbon monoxide is an odorless, colorless, tasteless gas. However, as we encounter it, it likely will have impurities which impart a garlic or aldehyde odor. It is lighter than air and is readily diffusible. It has an affinity for combining with hemoglobin more than 200 times greater than has oxygen. This is the basis for its sinister toxicity; it prevents the normal transportation and supply of oxygen to the cells. The brain is especially sensitive to this cut off in oxygen. Persons with anemia or an increased metabolic rate (children) are more susceptible.

Commercial or synthetic gas contains approximately 25 per cent carbon monoxide; but natural gases *contain no* carbon monoxide, nor does "bottled gases" contain any carbon monoxide.

Carbon monoxide, however, may be readily produced from "bottled gas" or natural gas as a result of normal combustion and a leaking flue; or improper burning and back-fire; or carbon deposits on combustion parts (gas refrigerators or ranges if not periodically serviced or adjusted may be a slow but constant source).

The most common exposure is from the exhaust of gasoline engines in an enclosed space (closed garage). Strange as it may seem, there have been deaths even resulting from exposure in an open canopy cruiser at sea during a calm.

Editor's Note: This is one of "Seasonal" articles on poisoning which will be published in the Monthly from time to time. It is prepared by Dr. Kaye in collaboration with the Richmond Poison Center.

TOXIC LEVELS

% Carboxyhemoglobin:
Below 5%—usually no symptoms.
Below 20%—mild symptoms.
Above 20%—moderate to severe symptoms.
Above 40%—may produce coma and death.

GENERAL SIGNS AND SYMPTOMS

Weakness, vertigo, headache, nausea, vomiting, sleepiness, ataxia, great weakness in legs, tightness of forehead, disturbed vision, diplopia, cyanosis, clonic tonic spasm, convulsions, coma, respiratory center depression and finally respiratory arrest; heart often beating for a short period after respiratory failure. Blood and skin are bright pink, which is the color of carboxyhemoglobin. This color is diagnostically characteristic.

CHRONIC CARBON MONOXIDE

Loss of appetite, nausea, vomiting, vision disturbances, headache, tightness, around forehead.

The question, however, of whether a persistent exposure to low concentrations of carbon monoxide over a period of time (chronic) is injurious to health is still open to discussion. Most reports indicate that it will not produce permanent injury especially if the person was not unconscious at any time as a result of exposure to carbon monoxide.

Carboxyhemoglobin is not a cumulative nor lasting union. In three (3) hours about 50% of the combined carbon monoxide is gone with ordinary breathing. Pure oxygen therapy greatly facilitates this removal.

TREATMENT

Immediately remove patient from exposure and keep in horizontal position:

Minimize oxygen demand.

Artificial respiration and oxygen therapy is immediately indicated if respiration is shallow. It is most urgent to prevent or abate anoxia!

Circulation may be improved by rubbing extremities. Keep patient warm and quiet. Avoid all strain. *Complete bed rest.* Be alert to a delayed relapse.

Whole blood transfusion *by exchange* is indicated in severe cases.

Office of the Chief Medical Examiner
404-6 North Twelfth Street
Richmond, Virginia

Public Health . . . .

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Public Health in Virginia

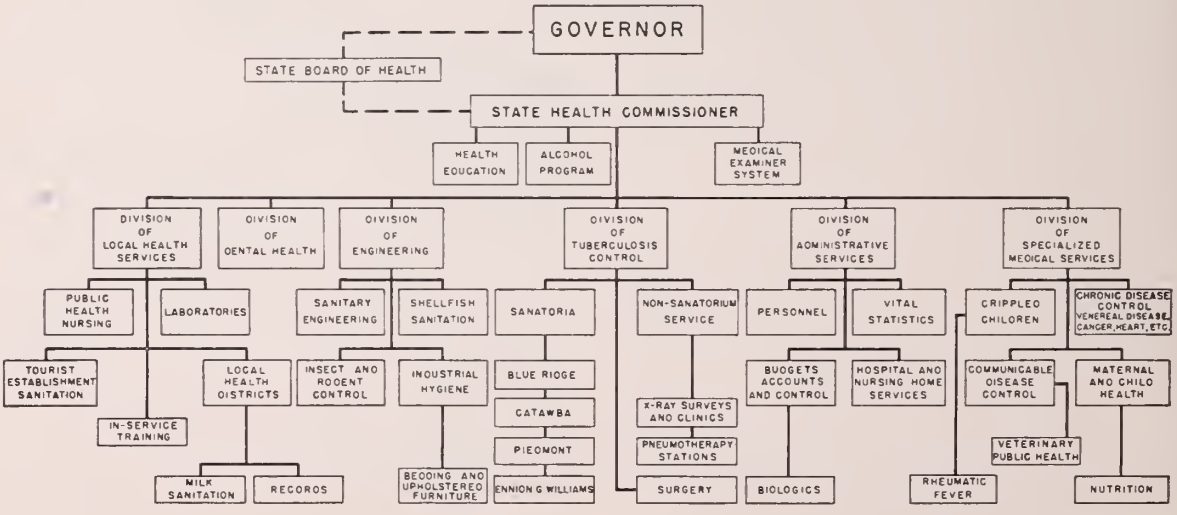
The creation of the State Board of Health of Virginia was the result of an Act of the General Assembly of 1871, which was approved by the Governor on February 13th of that year. Virginia was the third state in the United States to create such a board. The membership consisted of seven physicians appointed by the Governor for a term of four years. The Board was directed to make sanitary investigations and inquiries respecting the causes of disease, both epidemic and endemic, to devise some scheme to obtain medical and vital statistics, to act as an advisory board to the State in all hygiene and medical matters, and, among other things, to make an examination of and report upon the use of intoxicating liquor as a beverage upon industry, happiness, health, and lives of the citizens of the State.

The Board was required to meet at the capital of the State at least once every three months. The Board was directed to elect from its own number a permanent secretary, who, as its executive officer, was to perform and superintend the work prescribed in the Act. However, the final paragraph of this Act carried the provision "that the State Board of Health shall not in any way be a charge on the State." For about the first thirty years of its existence the Board had the unique distinction of operating without support from the State Treasury.

An Act of the General Assembly of 1900, approved March 7th, 1900, provided for a State Board of Health of seven members appointed by the Governor on recommendation of The Medical Society of Virginia. The salary of the secretary was fixed by the Board but the other members were allowed only a per diem stipend of four dollars each, plus traveling expenses incurred while engaged in the discharge of duties as members of the Board. The total annual appropriation was $5,000 for each of the next two years but the Act was later declared unconstitutional. In 1903, for the first time, the State Board of Health was given financial support by the General Assembly through an Act providing $4,000 a year for each of the next two years.

The General Assembly of 1908 created the offices of State Health Commissioner and Assistant Commissioner and increased the Board membership to twelve, all of whom must be members of The Medical Society of Virginia and who were appointed by the Governor for terms of four years. Section 4 of this law required that the State Board of Health establish suitable laboratories in Richmond for the

ORGANIZATION CHART — VIRGINIA STATE DEPARTMENT OF HEALTH



free examination of clinical material submitted by the physicians of the State. An appropriation was granted the Board for erecting buildings for the treatment of tuberculosis. The total allotment for all purposes was $40,000 per year for each of the following two years. This farsightedness may be said to have placed the State Department of Health on a firm foundation upon which the developments in public health in Virginia have been built.

The General Assembly of 1910 enlarged the powers of the Board by authorizing it "to make, adopt, promulgate, and enforce reasonable rules and regulations for the protection of the public health." This Act granted to the Board power that was needed and which has never been abused.

The membership of the Board was enlarged to fourteen in 1916 by the addition of two members appointed from the State-at-large, one of whom was to be a member of the State Dental Association. In 1920, the law was amended to require that at least five of the fourteen members of the Board should be members of The Medical Society of Virginia. The present law, provides for a Board of seven members, one chosen from each of the five grand divisions of the State—Tidewater, Middle Virginia, Piedmont, the Valley, and Southwest Virginia—and two from the State-at-large. At least two must be members of The Medical Society of Virginia, one a member of the Virginia State Dental Association and one a member of the Virginia Pharmaceutical Association. Members are appointed by the Governor for a term of seven years and one term expires annually. Vacancies are filled for the unexpired terms in the same manner as the original appointment was made.

The State Board of Health must meet annually in Richmond and at such other times and places as it may determine. It shall elect a president from its membership. Three shall constitute a quorum for the transaction of any lawful business. The State Health Commissioner shall, subject to confirmation by the Board, detail an officer or employee of the Department of Health to act as secretary of the Board. The Commissioner himself serves as executive officer but is not a member of the Board.

The Commissioner of Health is appointed by the Governor for a term of four years. He must be a physician, a graduate of a medical college which is now, or was at the time of his graduation, recognized by the Virginia State Board of Medical Examiners. He shall be skilled and experienced in the administration of public health duties and versed in sanitary sciences, and otherwise fitted and equipped to execute the duties incumbent upon him by law.

Beginning with the grant of $40,000 in 1910, the appropriations made for public health from the general fund of the State Treasury have increased, as shown by the following figures:

	Year	*Appropriation*
For the year ending		
February 28,	1920	$ 290,700
" "	1930	564,005
" "	1931	628,695
" "	1940	954,660
" "	1950	5,515,698
" "	1956	9,495,873

In addition to State funds, public health work is receiving increasing appropriations from counties and cities:

1931	181,748
1940	252,974
1950	610,841
1956	1,088,737

The State of Virginia is now completely covered with the services of local health departments; all 98 counties are included in the 39 county or district health departments. The central offices and laboratory are located in the State office buildings in Richmond. Branch laboratories are in Abingdon and Luray.

MONTHLY REPORT OF BUREAU OF COMMUNICABLE DISEASE CONTROL

	Oct. 1957	Oct. 1956	Jan.-Oct. 1957	Jan.-Oct. 1956
Brucellosis	2	5	21	29
Diphtheria	3	2	17	26
Hepatitis	31	39	390	418
Measles	59	62	4847	23587
Meningococcal Infections	4	15	59	78
Meningitis (Other)	24	16	387	132
Poliomyelitis	20	29	96	203
Rabies (In Animals)	20	16	275	262
Rocky Mt. Spotted Fever	1	4	30	51
Streptococcal Infections	356	290	5453	4965
Tularemia	1	1	26	19
Typhoid Fever	2	10	37	57

Pre-Paid Medical Care . . . .

Edited by
RICHARD J. ACKART, M.D.

The Doctors' Plan.

"Blue Shield is 'The Doctors' Plan' ". For a baker's dozen of years that statement has been truthfully made here in Virginia, and yet there remain all too many Virginians—unfortunately some physicians included—who consider the statement as having no more import than a sales-slogan. At its recent Annual Meeting The Medical Society of Virginia took official action to clear up any such misunderstanding.

Upon the recommendation of the Blue Shield Liaison Committee, the Council voted to establish a more direct organizational relationship between the Medical Society and Virginia Medical Service Association, the Blue Shield Plan which, thirteen years previously, the Society had launched into the then unchartered area of prepayment for professional services. To implement the relationship the Society is assuming the responsibility of selecting twelve physicians to be Directors of the Plan, charging them with the duty of periodically reporting to the Council about the operations of the Plan. Intrinsic to the arrangement, of course, is an opportunity for these Blue Shield Directors to receive the guidance of the Society's Councillors.

This recent action of the Medical Society was no more than the next logical step toward optimum professional control of the practice of medicine in Virginia. One of the most important, established roles of Blue Shield is to serve as the bellwether for all voluntary prepayment. Accordingly, if voluntary prepayment is a better answer to the nation's medical economic problems than is governmental intervention; *ergo,* it behooves the profession which is responsible for the solution of medical-economic problems to direct the activities and progress of Blue Shield.

Recognizing this fact, the Directors of Virginia Medical Service Association last year suggested to the Association's corporate Membership (all Participating Physicians of the Plan) that the responsibility of selecting those individuals who direct Blue Shield might best be shared with—if not completely turned over to—the organization which represents all the physicians in the State; which, through democratic processes, can voice the thoughts and opinions of all Virginia physicians; and which historically is the parent organization of Virginia Medical Service Association; that is, The Medical Society of Virgina. With the enthusiastic endorsement of the Membership, the Directors of VMSA requested specific help in this regard from the Medical Society itself, and the Blue Shield Liaison Committee came into existence. At joint meetings between the Liaison Committee and VMSA Directors it was agreed that, from now on, the responsibility of selecting the Plan's Directors should be shared between the Medical Society and the Membership.

Incidentally, when originally launching the VMSA Blue Shield Plan thirteen years ago, the Medical Society had delegated this responsibility entirely to the Membership—to the Plan's Participating Physicians. They were known then, October 1944, as the "Associated Doctors of Virginia"; subsequently, February 28, 1945, the Plan adopted its present corporate name of "Virginia Medical Service Association".

In anticipation of the Medical Society's acceptance of the joint Liaison Committee—VMSA Board recommendations, the Membership of the Plan arranged for a revision of the Association's By-laws and, at its recent Annual Meeting, adopted amendments to provide that "Of those Directors who are Doctors of Medicine, twelve shall be designated by The Medical Society of Virginia", and to provide that these Directors "shall each serve for such term as the Society may specify". Accordingly, the Society has *carte blanche* concerning its representation on the Plan's Board. The Membership also elects twelve physician-Directors and, in addition, elects eleven laymen who serve as representatives of the subscribing public.

Thus, the Board of Directors of VMSA includes thirty-five persons, two-thirds of whom are physicians—and 50% of the physicians are designated by the Medical Society. The VMSA Blue Shield Plan is indeed "The Doctors' Plan". It is your Plan, to be run by you and your colleagues either through your Membership or through your Medical Society, or both. It reflects your thought; it deserves your best thought.

There follows a listing of the names of those who, during 1958, will constitute the VMSA Board of Directors and who, accordingly, will want—will need—your help and support.

*Mason C. Andrews, M.D., Obstetrics and Gynecology, Norfolk.

*Arthur S. Brinkley, M.D., General Surgery, Richmond.

Mr. William T. Brunot, Comptroller, Reynolds Metals Company, Richmond.

F. Ashton Carmines, M.D., Orthopedic Surgery, Newport News.

Mr. H. T. Chittum, Personnel Superintendent, E. I. du Pont de Nemours & Co., Waynesboro.

George Cooper, Jr., M.D., Radiology, Charlottesville.

*Russell M. Cox, M.D., Pediatrics, Portsmouth.

Mr. R. B. Crawford, President, Kilkare Laundry, Farmville.

Mr. John E. Damerel, Director of Personnel, City of Richmond, Richmond.

Mr. S. Douglas Fleet, Vice-President and Sales Manager, Albemarle Paper Mfg. Co., Richmond.

William Grossman, M.D., Pediatrics, Petersburg.

Guy W. Horsley, M.D., General Surgery, Richmond.

Mr. M. A. Hubbard, Executive Secretary, Virginia Farm Bureau Federation, Richmond.

*Frank S. Johns, M.D., General Surgery, Richmond.

Mr. William H. King, Attorney, Richmond.

Charles H. Lupton, M.D., General Surgery, Norfolk.

Mr. James Mann, Jr., Attorney, Norfolk.

Mr. William Meacham, Associate Editor, Norfolk-Virginia Pilot, Norfolk.

*Harold W. Miller, Jr., M.D., General Practice, Woodstock.

H. B. Mulholland, M.D., Internal Medicine, Charlottesville.

*Claude A. Nunnally, M.D., Internal Medicine, Fredericksburg.

*Wilkins J. Ozlin, M.D., Urology, South Hill.

James Parrish, M.D., Obstetrics and Gynecology, Portsmouth.

H. Grant Preston, M.D., Ophthalmology and Otolaryngology, Harrisonburg.

*Benjamin W. Rawles, Jr., M.D., General Surgery, Richmond.

Edwin Rucker, M.D., Obstetrics and Gynecology, Richmond.

*William C. Salley, M.D., Internal Medicine, Norfolk.

*John R. Saunders, M.D., Psychiatry, Richmond.

Ernest G. Scott, M.D., Internal Medicine, Lynchburg.

McKeldin Smith, M.D., Internal Medicine, Staunton.

Mrs. Ben Wailes, Dean of Women, Sweet Briar College, Sweet Briar.

Thomas Walker, M.D., Anesthesiology, Richmond.

*D. Edward Watkins, M.D., General Surgery, Waynesboro.

Mr. Morris W. Whitaker, Secretary, Allen-Morrison Sign Company, Lynchburg.

*Julian H. Yeatman, M.D., General Practice, Fork Union.

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*Directors selected by Medical Society of Virginia.

"Vital to any solution [to the problem of increasing hospitalization prepayment rates] is the cooperation of the medical profession. While the hospital is a facility for the care of the ill, it is the doctor who decides if a patient should be admitted, the diagnostic tests to be given, the drugs to be administered, and the date the patient is discharged. Because of the wide range of this discretion the doctor must be sure of his decision. No one should be denied admission who needs it. Conversely, no one should remain in the hospital when it is no longer necessary that he be there."

Eighty-ninth Annual Report, Superintendent of Insurance, State of Ohio.

Mental Health . . . .

FREDERIC MACCABE, Jr., M.D.

Child Psychiatry in the Out-Patient Department of the University of Virginia Hospital

The Children's Section of the Psychiatric Out-Patient Clinic at the University of Virginia Hospital renders diagnostic and treatment service for many parts of the State which are not served by community mental hygiene clinics. The primary function of this clinic is to provide clinical experience for senior medical students. It has been found that three cases are the maximum that can be seen in one afternoon, so that demands for service necessitate a waiting list which averages one to two months for non-emergency cases. Each medical student spends four afternoons on child psychiatry during the month of his assignment to the psychiatric out-patient service.

Referral sources frequently send a social history, a report of school adjustment and academic progress, or previous medical or psychological studies at the time of requesting an appointment. Attempts are usually made to obtain such information before scheduling the appointment. Unfortunately a full diagnostic evaluation is usually crowded into a single day which tires young children as well as parents or welfare workers, especially after a trip which may vary from 100 to 200 miles. Typically a child will be seen at 9:00 a.m. for psychological tests and then sent to the Pediatric Clinic for examination, hopefully before 10 o'clock. (Occasionally when very complete medical reports are forwarded with the child, pediatric examination will not be scheduled, but having the pediatric examination in the same chart is generally preferable from a teaching standpoint and is often requested by physicians referring children to this clinic.) In the afternoon the child will be taken to a playroom by two medical students who will observe the child's use of play equipment as well as conducting whatever formal psychiatric examination is feasible. While the child is being examined, the parents or other responsible adults accompanying the child are being interviewed by other medical students. Following these examinations, the medical students meet with the psychiatrist and psychologist to discuss all aspects of the problem.

After this conference, the child is interviewed by the psychiatrist with the whole student group present and then the parents are interviewed, usually together if both have come. Thus, students may experience the teamwork approach typical of child guidance clinics, and each member of the student team sees each member of the family; also the psychiatrist has the benefit of medical student observations, as well as his own, upon each member of the family.

Many cases referred to this clinic are mentally defective. It has been gratifying to see student interest in the various organic brain syndromes causing mental defects, and in the emotional interaction of family members of defective children as well as in the social problems of such children. A rather high percentage of somatic disorders are also seen and these are of unfailing interest to the student group. When the waiting list is not prohibitively long, some of the acute situational reactions are seen. Treatment is only occasionally possible and even then must be limited to a relatively small number of visits. Even in cases where medical students could be satisfactorily supervised as therapists, the very short time they are assigned to the psychiatric clinic makes this impractical.

From experience in this clinic it is felt that local clinics are preferable for diagnostic and treatment services to the individual patient. Medical student teaching would also be facilitated by use of clinical material in such clinics, provided that medical students could be assigned to the service for a sufficient period of time to observe the progress of treatment. Third year medical students do receive two months of seminar type of presentation of case material from a local child guidance clinic where the emphasis can be upon treatment, but this is not first hand clinical experience for the students.

The demand for services in this clinic underlines the need for the establishment of more community

FREDERICK MACCABE, JR., M.D., *Fellow in Child Psychiatry, Children's Service Center of Charlottesville and Albemarle County, Inc., Charlottesville, Virginia.*

Approved for publication by Commissioner, Department Mental Hygiene and Hospitals.

mental hygiene clinics, but it is also felt that existing community clinics should be made accessible to patients who are now deprived of service by arbitrary geographical limits usually conforming to local city or Community Chest boundaries. The insistence of local Community Chest Boards that the clinic they support render service primarily to their community is understandable, but it must be remembered that these clinics are supported by federal and state funds as well as by local funds.

New Type of Medicine

A new kind of medicine—rehabilitation—is being created today as more doctors realize that the medical job is not done when the cast is removed or when drugs have cured the immediate illness.

In fact, rehabilitation is becoming as important as preventive health and the actual medical treatment of the sick or injured, according to a special article in the November 2 Journal of the American Medical Association.

Today, as never before, thousands of physicians of all types are recognizing that follow-through rehabilitation of all patients (not just the severely disabled) is a prime medical responsibility.

World War II and the "Penicillin Age," with its beneficial chain reaction in all branches of medicine, began to open many door which formerly had been closed to disabled persons.

"Turning to the handicapped to relieve its wartime manpower shortage, industry found it was getting more than it bargained for: better workers. One-time employees injured in battle, meanwhile, were surviving hurts which, a generation earlier, surely would have doomed them. Many of these veterans returned home to show that, with proper training, they too could be self-sufficient."

While "more likely than not, a doctor's hand holds the key" to the doors now opening to the disabled person, the doctor can't do the job alone. He needs the help and skill of allied medical groups, industry, and lay individuals and organizations.

Industry, according to the article, has an ample pool of disabled from which to draw manpower. Over 2 million seriously handicapped men and women of employable age are wasting away their skills. This number is being increased by about 250,000 each year.

Every day of every year the American public is paying $1,500,000 in taxes to provide maintenance and medical care for the disabled. Yet one government study shows that earnings of the disabled persons rehabilitated last year rose by 580 per cent—from 19 to 129 million dollars.

Miss Mary Switzer, director of the U.S. Office of Vocational Rehabilitation, estimates that in the next three years, rehabilitees of 1956 will pay back in federal taxes the amount of money which the U.S. has spent for their rehabilitation—32 million dollars. States had contributed another 19 million dollars.

In addition to helping themselves and the nation's economy as a whole, rehabilitated persons have demonstrated their worth to their employers all over the country. For example, Lockheed Aircraft Company saved $65,000 in salvage by employing a workshop for the blind to recover tiny nuts, screws, and washers from sweeping below its B-47 production line.

Of course, the article pointed out, a man doesn't suddenly become skilled by virtue of his handicap. It takes expert training and counseling under medical guidance to develop capabilities out of disabilities. This has led to job training for the handicapped at 123 Veterans Administration hospitals, at special centers, in some general hospitals, and even on the work site. And companies which will hire only handicapped workers are developing.

But, as the article concludes, rehabilitation for the disabled is much more than a cure or a way to a job. It is "delicious freedom from a prison of dependence." Having survived, disabled people now need to be revived.

Miscellaneous . . . .

A.A.M.A.

The First Annual Convention of American Association of Medical Assistants was a complete success based upon reports from our Virginia representatives, Mrs. W. G. Dove, Mrs. E. S. Carwile, Miss Ronnie Murphy and Miss Helen Cyrus.

All four of these ladies were from the Lynchburg Chapter, which is another indication of the thoroughness of our able Executive Secretary, Bob Howard and the enthusiasm he instills in his projects. The Lynchburg Chapter is one of Bob's children—being the first one in Virginia. He was responsible for organizing its V.A.M.A. which had their first meeting in Lynchburg.

The A.M.A. recently approved the A.A.M.A. by a resolution in the House of Delegates.

This organization is attracting a lot of interest from a PR standpoint judging from the subjects covered at this meeting, as well as guests.

Heading this list of guests was Mr. Leo Brown, Director of PR of A.M.A., accompanied by several others from the A.M.A. PR Office.

Mr. Jerry Pettis, PR Counsellor for the Los Angeles County Medical Association, highlighted the first afternoon program with a discussion of basic human relations.

Next years meeting will be at The Palmer House, Chicago, Illinois.

An excellent P.R. project for our local medical societies is aiding in organizing chapters of medical assistants. The Executive office of The Medical Society of Virginia can be most helpful and would be delighted at an opportunity to assist in such proven project to better Public Relations. I am speaking from actual knowledge of the value of such organizations.

John Wyatt Davis, Jr., M.D.
Chairman Public Relations Committee for 1956 and 1957.

Nobel Prize Winners in Medicine and Physiology

The Medical School Library of the University of Virginia is exhibiting through January a collection of books, journal articles and portraits of the winners of Nobel Prize awards in medicine and physiology from the first award in 1901 to the present date.

Since many of the awards were made for basic research in physiology and other related sciences, a number of the awardees are not as well known generally as others who applied the winners' research later and gained greater public renown. In 1954 Thomas H. Weller, Frederick C. Robbins and John F. Enders received the award for their cultivation of the poliomyelitis viruses in tissue culture.

Many have heard of Koch (winner in 1905) but perhaps fewer know of Kocher (1909) and Kossel (1910). Koch made investigations and discoveries in regard to tuberculosis; Kocher worked on the physiology, pathology, and surgery of the thyroid gland; Kossel contributed to the chemistry of the cell through his work on proteins, including nucleic substances.

A much simplified history of medicine is revealed merely from the citations of these Nobel awards. The first award was made in 1901 to Emil von Behring for his work on serum therapy, especially its application against diphtheria; the last announced at this writing, 1956 went to Werner Forssmann, Dickinson W. Richards, Jr., and André F. Cournand for their work in perfecting the method of cardiac catherization and its application in the study of diseases of the heart and lungs. Great scientific strides have been made to allay some of these heart conditions, possibly because in 1924 William Einthoven had discovered the mechanism of the electrocardiogram, for which he won a Nobel award.

Certain new drugs, some which already are not used as much as formerly, have been cited in Nobel prizes. In 1939 Gerhard Domagk won for his work with prontosil (a name for the sulfa drugs); in 1945 Alexander Fleming, Ernst Boris Chain and Howard Walter Florey won for their discovery of penicillin; in 1952 Selman A. Waksman won an award for his discovery of streptomycin. Work with vitamins received five awards in the years 1929 (when two men were cited), 1937 and 1943 (when two men were cited). Even work with DDT efficacy as a contact poison received an award for Paul Müller in 1948.

A Nobel prize winner lives in Charlottesville. C. J. Davison, who was formerly a member of the University Physics Department, won on the diffraction of the electron. Philip Showalter Hench, brother of Charlottesville's Atcheson L. Hench, won in 1950, together with Edward Calvin Kendall and Tadeus Reichstein, for their discoveries concerning the suprarenal cortex hormones.

The Medical Society of Virginia . . . .

Council Minutes

The meeting of the Council of The Medical Society of Virginia was called to order by Dr. James D. Hagood, President, at 1:00 p.m., on Sunday, October 27, 1957, at the Hotel Shoreham, Washington, D. C. There was a 100 per cent attendance. Attending were Dr. Harry C. Bates, Jr., Dr. James P. King, Dr. Reverdy H. Jones, Jr., Dr. Harry J. Warthen, Dr. Mack I. Shanholtz, Dr. John T. T. Hundley, Dr. Fletcher J. Wright, Jr., Dr. A. A. Creecy, Dr. Walter P. Adams, Dr. Benjamin W. Rawles, Jr., Dr. Louis P. Bailey, Dr. Harold W. Miller, Dr. David W. Scott, Jr., Dr. James P. Williams and Dr. J. D. Zylman. Also present were Dr. K. D. Graves, Secretary of the State Board of Medical Examiners, Dr. Walter A. Porter, Chairman of the Finance Committee, and Mr. Robert C. Duval, Jr., Attorney of the Society.

Dr. Porter presented the report of the Finance Committee and the proposed budget for 1957-58 was considered in detail. (The budget, as adopted, is included in the minutes of the first session of the House of Delegates.)

Council was then presented a request from the Virginia Medical Service Association (Richmond Blue Shield) that The Medical Society of Virginia each year appoint 12 directors to that organization. It was explained that the Richmond Blue Shield Plan has, for some time, desired a closer working relationship with the Society. The Council was appreciative of the opportunity to appoint 12 of the Plan's directors and adopted a resolution which provided for the appointments to be made by the President.

Mr. Duval acquainted Council with the necessary procedure for selling the present Headquarters Building, and suggested a resolution which would do much to clear the way for such a transaction. The resolution was adopted as follows:

Resolved by the House of Delegates of The Medical Society of Virginia, in meeting duly assembled, that the Council of The Medical Society of Virginia is hereby authorized and empowered to take whatever steps it may deem appropriate and proper to effect a sale and conveyance of the real property known as 1105 West Franklin Street, Richmond, Virginia, and now used as a headquarters building for the Society, at such price and upon such terms as the Council may deem to be for the best interests of the Society; and

Resolved Further, that in the event a sale of the said property is agreed upon, the President of the Society is hereby authorized and directed to execute in the name of the Society, by himself as President, a good and sufficient deed of general warranty, with the usual covenants of title, and to acknowledge and deliver the same to the purchaser; and the Secretary of the Society is authorized and directed to affix the corporate seal to the said deed and attest the same, and to acknowledge the deed for recordation.

Resolved Further, that the Council is hereby authorized and empowered to delegate to its Executive Committee the power and authority hereby conferred.

The Medicare Program, and its attending problems, was then discussed. Attention was called to a fee of $5.00 for a procedure involving incision and drainage. The fee was believed by the Medicare Advisory Committee to be much too low. It was moved and adopted that the Executive Committee negotiate this fee, and such others as might appear out of line, with the Department of the Army.

The Medicare Committee also voiced concern over "double coverage" involving the payment of two physicians in certain instances. It was brought out that in some cases, the referring physician would follow a surgical patient right on through his postoperative care. This care normally is considered covered by the surgical fee. It was moved and passed that the Medical Advisory Committee handle such matters as it sees fit and consult the Ethics Committee should the situation warrant.

A resolution prepared by the Norfolk County Medical Society, objecting to the present procedure used to pay for drugs under the Medicare Program, was carefully considered. A motion was adopted referring the resolution to the Medicare Advisory Committee for study and disposition.

Council was advised that, during the past year, there had been an increased demand on the services of Mr. Duval. Some question existed as to what extent legal assistance should be granted individual members, component societies, and the various specialty groups. A definite policy was desired in order that the State Office might act properly in any case where doubt existed. It was moved and passed that the President be empowered to act in such instances and authorize legal assistance when considered advisable.

Attention was called to reports from two component societies indicating that the majority of their members were in favor of physicians being covered under social security. It was moved and passed that these reports be referred to the Society's Delegates to the AMA.

The advisability of standard insurance claim forms was discussed and it was reported that considerable progress had been made during the past several years. It was learned that standard insurance forms prepared by the Health Insurance Council were now used by approximately 60 per cent of the carriers writing health insurance. Although the forms are being utilized in some areas of Virginia, reports from many individual members make it evident that the use is not nearly as widespread as it should be. It was moved and passed that the Society endorse the use of standard insurance claim forms and that it urge the use of the forms by those companies not doing so already.

Considered next was a proposal that the Society honor its past-presidents by presenting each of them an attractive plaque suitably inscribed. Two samples were shown, and it was moved and passed that the Executive Secretary make the selection and proceed accordingly.

Council was then advised that a lease had been executed in connection with the Walter Reed Birthplace. Pointed out was the fact that the report of the Walter Reed Commission, published in the October issue of the Virginia Medical Monthly, had been written before the lease had been executed, and, thus, the recommendations contained in the report can now be disregarded.

An invitation to the Executive Secretary to become a member of the Professional Management Association was approved.

Council then considered a resolution adopted by the Virginia Pharmaceutical Association with reference to the practice of certain persons and firms buying sample packages of medicine from physicians or pharmacists for the purpose of repackaging and selling. The resolution vigorously opposed such action.

A resolution was then introduced stating that the Council concurred with the action of the Virginia Pharmaceutical Association and disapproved of the selling of samples by physicians. The motion was adopted.

A letter directed to Virginia nurses from an AFL-CIO organizer was brought to the attention of Council and it was moved that it be referred to the Committee to Confer with the State Board of Nurse Examiners. The motion was adopted.

Dr. Zylman then reported that a newly organized Society of Internists in the Northern Virginia area had requested recognition by The Medical Society of Virginia. Since the State Society does not contain sections, but rather works with the various specialty groups, it was moved that the Executive Secretary write a letter to the officers of the newly formed association explaining the situation. The motion was adopted.

Dr. King expressed the wish that the Council honor the memory of Dr. Frank A. Farmer. This suggestion met with unanimous approval, and it was moved that the present members of Council present an appropriate and useful piece of furniture for the new headquarters building in memory of Dr. Farmer. The motion was adopted unanimously and it was the consensus that the House Committee should make the selection.

It was moved and passed that Dr. King be requested to prepare a resolution on Dr. Farmer to be spread upon the Council minutes and to be sent to the family. The motion was adopted.

Dr. Rawles then introduced the following resolution which was adopted:

Be It Resolved That The Medical Society of Virginia recognize the important work being carried on by the Virginia Council on Health and Medical Care and take particular note of its accomplishments in the field of physician placement, and

Be It Further Resolved That Mr. Edgar J. Fisher, Jr., Director of the Council be commended on the efficient manner in which he had directed the activities of the Council.

Dr. Rawles then introduced a second resolution which was adopted:

Be It Resolved That The Medical Society of Virginia recognize the dedicated efforts of Dr. George Duncan, Norfolk, in the interests of the physically handicapped and support his nomination for the "physician's award" presented annually to a Virginia physician by the Governor's Committee on the Employment of the Physically Handicapped, and

Be It Furthter Resolved That every effort be made to secure Dr. Duncan's nomination for the national award made each year by the President.

Council then heard a report from Dr. King with reference to the new headquarters building. Everyone was pleased to learn that contracts had been signed and that actual construction was scheduled to begin within the next few days. Particularly gratifying was Dr. King's statement that the bid which had been accepted was very much in line with the

thinking of both Council and the Building Committee.

The 1959 Annual Meeting was the next topic of discussion and considerable interest was expressed in facilities now available in Williamsburg and Hot Springs. It was moved that Roanoke be tentatively selected as the site of the 1959 meeting and that the Executive Secretary be instructed to investigate the Williamsburg situation. The motion was adopted.

A question was raised concerning the voting privileges of the ex-officio members of Council. Mr. Duval stated that there appeared no reason why these members should not vote. It was then moved and adopted that ex-officio members of Council be officially granted the privilege of voting.

There being no further business, the meeting was adjourned.

House of Delegates

FIRST SESSION

The House of Delegates of The Medical Society of Virginia met in the West Ballroom of the Hotel Shoreham, Washington, D. C., on Sunday, October 27 and was called to order at 8:00 p.m. by Dr. James D. Hagood, President.

Dr. Hagood welcomed the Delegates to Washington and then introduced Dr. John T. T. Hundley, Speaker of the House. Dr. Hundley received a report from Dr. Ira L. Hancock, Chairman of the Credentials Committee, who reported a quorum present.

Minutes of the 1956 meeting of the House of Delegates were approved as published in the December, 1956 issue of the Virginia Medical Monthly.

Dr. Walter A. Porter, Chairman of the Finance Committee, was recognized for the purpose of presenting the proposed budget for fiscal 1957-58 as recommended by Council. It was then moved that the Committee report be accepted and the budget adopted. The motion carried.

The budget, as approved, is listed below:

BUDGET 1957-58

Executive Office	
Salaries	$26,000.00
Telephone & Telegrams	1,500.00
Postage	900.00
Stationery & Supplies	1,000.00
Office equipment—Repairs & Replacements	800.00
Building Maintenance	2,100.00
Building Repairs	500.00
Convention Expense	1,000.00
Council & Committee Expense	2,500.00
Delegates to AMA	1,800.00
Executive Assistant	350.00
President's Expense	1,000.00
Traveling Expense	1,800.00
Virginia Medical Monthly	30,000.00
Scientific Exhibits	2,500.00
Legal Expenses	3,000.00
Walter Reed Commission	500.00
Woman's Auxiliary	100.00
Membership Dues—Affiliated Agencies	150.00
Editor—Virginia Medical Monthly	600.00
Special Appropriations:	
Virginia Council on Health & Medical Care	2,000.00
American Medical Education Foundation	2,000.00
National Society on Medical Research	150.00
Sub-Committee on Rural Health	500.00
Student American Medical Association	200.00
Social Security Taxes	500.00
Miscellaneous	600.00
Public Relations:	
Conference Expenses	500.00
Radio & Press	600.00
Literature & Bulletins	300.00
Exhibits & Miscellaneous Projects	100.00
TOTAL	$85,550.00

Mrs. Lee S. Liggan, President of the Woman's Auxiliary to The Medical Society of Virginia, was then introduced. Mrs. Liggan addressed the House briefly and reported the progress of the Auxiliary during the year.

The Speaker introduced Mrs. J. R. St. George, President-Elect of the Woman's Auxiliary to The Medical Society of Virginia.

Dr. Hundley next presented Dr. James Watts, President of the Medical Society of the District of Columbia, and Dr. Charles Hoffman, President of the West Virginia State Medical Association. Dr. Watts welcomed the Delegates to Washington on behalf of the District Society.

Society Delegates to meetings of allied organizations were then recognized. Dr. Reverdy H. Jones, Jr., had represented the Society at the annual meeting of the Virginia Pharmaceutical Association and Dr. James L. Hamner had served as Delegate to the annual meeting of the Virginia Academy of General Practice.

Dr. Hundley recognized the following visiting Delegates to the annual meeting: Miss Mary Jane McCone, Virginia State Nurses Association, Dr. S. N. Gray, Virginia State Dental Association and Mr. Spencer Albright, Student AMA Chapter, Medical College of Virginia.

Special merit awards were then presented by Dr. Hagood to three persons most responsible for bringing a physician to Tangier Island. The awards were made to Dr. Mikio Kato, The Reverend Oscar Rishel and Mr. Edgar J. Fisher, Jr. Mr. Fisher accepted

the award for Dr. Kato, who was unable to leave the Island because of the pressing need for his services.

The Speaker next introduced Mr. Charles E. Green, Jr., Delegate from the Virginia Pharmaceutical Association, who acquainted the House with a resolution adopted earlier by his Association. He asked that the House support the resolution which opposed the practice of certain persons and firms buying sample packages of medicine from physicians and pharmacists for purposes of repackaging and selling.

The report from Council was presented by Dr. Hundley. He first read a resolution prepared by Mr. Duval for the purpose of simplifying the procedure under which the present headquarters building of the Society could be sold. The resolution was adopted as follows:

Resolved by the House of Delegates of The Medical Society of Virginia, in meeting duly assembled, that the Council of The Medical Society of Virginia is hereby authorized and empowered to take whatever steps it may deem appropriate and proper to effect a sale and conveyance of the real property known as 1105 West Franklin Street, Richmond, Virginia, and now used as a headquarters building for the Society, at such price and upon such terms as the Council may deem to be for the best interests of the Society; and

Resolved Further, that in the event a sale of the said property is agreed upon, the President of the Society is hereby authorized and directed to execute in the name of the Society, by himself as President, a good and sufficient deed of general warranty, with the usual covenants of title, and to acknowledge and deliver the same to the purchaser; and the Secretary of the Society is authorized and directed to affix the corporate seal to the said deed and attest the same, and to acknowledge the deed for recordation.

Resolved Further, that the Council is hereby authorized and empowered to delegate to its Executive Committee the power and authority hereby conferred.

The House was informed that Roanoke had been tentatively recommended for the 1959 annual meeting, although it was suggested that the State Office look into facilities reported to be available at Williamsburg and Hot Springs. Dr. Harry B. Stone, Jr., stated that the physicians of Roanoke would be pleased to have the Society meet there in 1959, but moved that the Council be authorized to make final selection. The motion carried.

A progress report on the new headquarters building was presented by Dr. King, who informed the House that actual construction would soon begin. Dr. King further stated that costs thus far were well within the budget adopted by the House last year, and he assured the Delegates that his Committee would continue to make every effort to keep costs well within bounds.

Dr. Rawles was requested to report on the President's Award to the physician who has contributed most to the rehabilitation of the physically handicapped. Dr. Rawles presented the resolution adopted earlier by Council which recognizes the dedicated efforts of Dr. George Duncan, Norfolk. The resolution (see Council minutes) was adopted.

Dr. Hundley, with the approval of the House, appointed the following Delegates to meet for the purpose of selecting a Committee on Nominations. They were Dr. Russell Buxton, First District; Dr. W. Callier Salley, Second District; Dr. Elam C. Toone, Jr., Third District; Dr. James L. Hamner, Fourth District; Dr. W. N. Thompson, Fifth District; Dr. George Craddock, Sixth District; Dr. Charles L. Savage, Seventh District; Dr. M. B. Lamberth, Jr., Eighth District; Dr. J. C. Moore, Ninth District and Dr. Lloyd B. Burk, Tenth District.

The following committee reports, published in the October 1957 issue of the Virginia Medical Monthly, were received: Executive Secretary-Treasurer; Delegates to the American Medical Association; Editorial Board; Scientific Exhibits and Clinics; Medical Service (supplemental report by Dr. Buxton was referred to the Reference Committee); Membership and Ethics.

The report of the Judicial Committee was next considered and an explanation offered by Dr. Hutcheson. The proposed amendment to Article III of the Constitution was then adopted (ratified at a General Session of the Society on Monday afternoon, October 28).

The following reports were also received: Public Relations; Mediation; Cancer; Child Health; Conservation of Sight; Public Welfare; Walter Reed Commission (lease explained).

The report of the Liaison Committee to Confer with the United Mine Workers Welfare Fund was then received and Dr. Williams moved that the House approve the Guides to Relationships Between State and County Medical Societies and the United Mine Workers of America Welfare and Retirement Fund, which were adopted earlier by the AMA. The motion was referred to the Reference Committee.

Also received were the following reports: Blue Shield Relationships; Mental Hygiene; Conservation of Hearing; National Legislation (supplemental report received from Dr. Archer); National Emergency

Medical Service; Advisory to Woman's Auxiliary; Heart; Tuberculosis and Venereal Disease Control.

The report of the Medicare Advisory Committee was received after which Dr. Ragland introduced a resolution requesting The Medical Society of Virginia to repudiate any aspects of the present medicare program which violate the traditional doctor-patient relationship and which promote waste of the taxpayers' money. The resolution was referred to the Reference Committee.

Dr. Andrews offered a resolution, sponsored by the Norfolk County Medical Society, which opposes the practice of physicians acting as financial intermediaries in the purchase of drugs (other than injectionables) for patients under the Medicare Program, where other satisfactory sources of supply are available. The resolution was referred to the Reference Committee.

Other reports received were American Medical Education Foundation; House; Confer with State Board of Nurse Examiners; Polio; Federal Medical Services; Society Headquarters; Insurance and Maternal Health (supplemental report referred to Reference Committee).

The Speaker called for new business and resolutions introduced by the following Delegates were referred to the Reference Committee.

Dr. Marcellus Johnson, III—Resolution calling for The Medical Society of Virginia to sponsor action in the General Assembly to restrict tuberculosis sanatoriums of Virginia to the treatment of patients in which there is a previous presumptive diagnosis of pulmonary tuberculosis and to make excess bed space available to the senile chronically ill needing custodial and nursing care only.

Dr. K. K. Wallace—Resolution calling for opposition to any change in the Medical Practice Act which might further the corporate practice of medicine.

Dr. K. K. Wallace—Resolution opposing use of x-ray or fluoroscopic units for shoe fitting.

Dr. Thomas S. Edwards—Resolution requesting President of The Medical Society of Virginia to appoint special committee to study and recommend policies to guide the Society in its relationships with government agencies, labor groups, etc.

Dr. Thomas E. Haggerty—Resolution requesting The Medical Society of Virginia to establish a committee to study problems which may be associated with any future vaccine programs.

A meeting of the Reference Committee was announced for 10:00 a.m. the following morning, October 28, in the Club Room of the Hotel Shoreham.

There being no further business, the Speaker declared the meeting adjourned until Tuesday, October 29, 1957 at 4:00 p.m.

SECOND SESSION

The Second Session of the House of Delegates of The Medical Society of Virginia was called to order by Dr. John T. T. Hundley, Speaker of the House, at 4:00 p.m., Tuesday, October 29, 1957, in the Club Room of the Hotel Shoreham.

Dr. Richard Palmer, member of the Credentials Committee, reported a quorum present.

The report of the Reference Committee was then considered. The Committee recommended that the following resolution, introduced by Dr. Buxton at the request of the Virginia Radiological Society be adopted. The motion for adoption carried.

WHEREAS Radiology is an integral part of the practice of medicine, and is so recognized by all authoritative medical associations, whether the radiological services are rendered in or outside of a hospital, and

WHEREAS Radiological services can be performed only by or under the supervision of physicians,

BE IT THEREFORE RESOLVED THAT The Medical Society of Virginia hereby declares that RADIOLOGY is the "PRACTICE OF MEDICINE".

The following resolution, also introduced by Dr. Buxton on behalf of the Sub-Committee on Industrial Health, was adopted on the recommendation of the Committee.

RESOLVED THAT The Medical Society of Virginia:

(1) support the plans and policies of the State Department of Health in regulation of and safeguarding against radiation exposure;

(2) that the Legislative Committee assist the Department of Health in securing adequate legislation to effect that purpose;

(3) that a special committee on radiation hazards be appointed to study and advise concerning the hazards of radiation exposure.

Also adopted was the following recommendation offered by Dr. Buxton for the Sub-Committee on Industrial Health.

The Committee further recommends that the House of Delegates call attention of the Legislative Committee to resolution passed by this body at its meeting one year ago recommending that the Legislature of the State of Virginia take positive action toward securing a "Second Injury" law as part of the Compensation laws of the State.

The recommendations of the Reference Committee with reference to proposed amendments to the By-Laws were considered, and it was moved that all of the proposed amendments covered in the report

of the Judicial Committee be adopted with the exception of that portion of Article V, Section, concerned with the alternate method of electing delegates and alternates to the House of Delegates. The motion was carried.

Article IX of the By-Laws was amended by removing the Committee on Postgraduate Education from the Standing Committees.

Article V. Section 2 was amended by adding a new paragraph at the end of Section 2. This amendment recognizes membership in more than one society, and at the same time limits voting rights and rights of representation of individuals who are members of more than one society.

Article V was amended by adding a new section which authorizes special meetings of the House of Delegates at the call of the Council and to provide how such meetings shall be called and held.

Approved next was the following resolution, introduced by Dr. James P. Williams.

Resolved that the House of Delegates of The Medical Society of Virginia approve the "Suggested Guides to Relationships Between State and County Medical Societies and The United Mine Workers of America Welfare and Retirement Fund", as adopted by the House of Delegates of the AMA on June 6, 1957, and further

Resolved that the Liaison Committee be empowered to confer with the Welfare Fund, and be authorized to formulate a working agreement between The Medical Society of Virginia and the Welfare Fund, subject to approval by the House of Delegates or the Council.

The Reference Committee recommended that the following be substituted for the resolution sponsored by the Norfolk County Medical Society opposing changes in the Medical Practice Act. The Committee's recommendations were adopted.

Resolved that The Medical Society of Virginia adopts the Statement of Principles contained in the report of the Medical Service Committee and affirms its opposition to any change in the Medical Practice Act which furthers the corporate practice of medicine or violates the Statement of Principles above noted.

It was then moved and adopted that the following be substituted for the resolution, sponsored by the Norfolk County Medical Society, opposing the practice of physicians acting as financial intermediaries in the purchase of drugs under the Medicare Program.

Whereas The Medical Society of Virginia is opposed to the practice of physicians acting as financial intermediaries in the purchase of drugs (other than injectionables) for patients by the government, where other satisfactory sources of supply are available,

Be It Resolved that The Medical Society of Virginia instruct the fiscal administrator of the Medicare Program not to make payment for drugs used in connection with the Program, and also to instruct its Executive Committee to negotiate this matter with the Department of Defense at the proper time.

It was reported that the Reference Committee recommended that the resolution on the Dependents Medical Care Act, sponsored by the Richmond Academy of Medicine, be referred to the Committee on Federal Medical Services for consideration and disposition. A motion to this effect was amended by adding a sentence instructing officers of The Medical Society of Virginia *not* to renew the present medicare contract until a special session of the House of Delegates is called to consider such action. The motion, as amended, was adopted.

A supplemental report of the Committee on Maternal Health was then considered, and it was moved that the report and its recommendations be adopted. The complete report is published in this issue.

Considered next was the resolution introduced by Dr. Marcellus A. Johnson, III. The Reference Committee had recommended certain amendments to the resolution and these were approved by the House. The resolution, as adopted, follows:

Whereas:

1. The State Tuberculosis Hospitals have a decreasing number of patients and an increasing number of empty beds.

2. There has been an apparently unjustified suspicion that the facilities of the tuberculosis sanatoriums have been used for patients other than those having or suspected of having tuberculosis. Thus, until there is a change in policy, it is emphasized that care and treatment in the sanatoriums should be confined to patients having proven or suspected tuberculosis.

3. The treatment of additional categories or patients by the State would be an invasion of the private practice of medicine which The Medical Society of Virginia should oppose continuously and vigorously.

4. Our greatest need in the field of medical care in Virginia is the custodial and nursing care of the indigent senile chronically ill who need no active diagnosis or treatment.

We, Therefore, Move that The Medical Society of Virginia sponsor and strongly support action in the next meeting of the General Assembly of Virginia to:

1. Restrict the tuberculosis sanatoriums of Virginia to the treatment of patients in which there is a previous presumptive diagnosis of pulmonary tuberculosis, and also

2. That the problem of mounting vacancies in the sanatoriums be referred to the Committee on the Chronically Ill for the purpose of making recommendations to the House.

The following resolution, introduced by Dr. Thomas E. Haggerty, was adopted.

WHEREAS, The Fairfax County Medical Society recognizes the almost impossible task of organizing the recent Asian Flu Vaccination Program effectively on such short notice, and

WHEREAS, The Fairfax Society recognizes that a poorly organized and executed program creates hardships and difficulties for the public, and serves only to bring discredit and criticism to Medicine,

BE IT FURTHER RESOLVED, That the Fairfax Society petition The Medical Society of Virginia to set up a Committee to study the problems which may be associated with any future vaccine programs, and

BE IT FURTHER RESOLVED, That the State Medical Society invite the Virginia Pharmaceutical Association to participate in this Committee.

A motion to amend a resolution introduced by Dr. Thomas S. Edwards by substituting the word "we" for "I" was adopted. The resolution, as amended, was then adopted as follows:

WHEREAS the normal practice of medicine is continually being attacked by (1) Acts of the Congress; (2) large labor groups, and (3) other, and

WHEREAS we feel that the practice of medicine should be continued in its honored fashion and

WHEREAS we feel that The Medical Society of Virginia should study the matter and make the strongest sort of recommendations,

BE IT RESOLVED that the President of The Medical Society of Virginia appoint a special committee to study these problems in detail and refer them back to the House of Delegates with their recommendations.

Next considered was a resolution sponsored by the Norfolk County Medical Society with reference to the fluoroscopic method of shoe fitting. The resolution was adopted in the following form.

WHEREAS, penetrating radiation from any source, radioactive elements, isotopes, or x-rays, are potentially harmful to cells of the body and the harmful effects may not be demonstrable for many years, and

WHEREAS, such forms of energy should be used for diagnosis or therapy only when the benefit far outweighs a slight calculated risk, and

WHEREAS, the use of x-rays in the fluoroscopic method of shoe fitting does not provide better fitting or any other benefit, and

WHEREAS, the use of shoe fitting fluoroscopes is a definite hazard because of exposure of the bone cells to x-rays, and also possible exposure of gonad cells,

BE IT RESOLVED by the Norfolk County Medical Society that this Society disapproves the use of shoe-fitting fluoroscopes; and

BE IT FURTHER RESOLVED that this Society recommends that legislative action to prohibit the use of x-ray or fluoroscopic units for shoe fitting be taken by the Commonwealth of Virginia, and

BE IT FURTHER RESOLVED that copies of this resolution be sent to our State Senators and Delegates from Norfolk, to the Council of the City of Norfolk, Virginia, and to the House of Delegates of The Medical Society of Virginia.

Dr. W. Callier Salley, Chairman of the Nominating Committee, was recognized and submitted the following nominations:

President-Elect: Walter P. Adams, M.D., Norfolk
1st Vice-President: J. R. B. Hutchinson, M.D., Arlington
2nd Vice-President: Holcombe H. Hurt, M. D., Lynchburg
3rd Vice-President: C. C. Hatfield, M.D., Saltville
Executive Secretary—
Treasurer: Robert I. Howard, Richmond

The following nominations for Councilors were received and approved:

1st District: Sheppard K. Ames, M. D. Cape Charles
2nd District: K. K. Wallace, M.D., Norfolk
3rd District: Benjamin W. Rawles, Jr., M.D., Richmond
5th District: Louis P. Bailey, M.D., Nathalie
6th District: Alexander McCausland, M.D., Roanoke
7th District: Harold W. Miller, M.D., Woodstock
9th District: James P. Williams, Richlands

The following nominations for the State Board of Medical Examiners were received:

1st District: Waverly R. Payne, M.D., Newport News
John R. Mapp, M.D., Nassawadox
Edward V. Siegel, M.D., Newport News
2nd District: Russell M. Cox, M.D., Portsmouth
W. Callier Salley, M.D., Norfolk
K. K. Wallace, M.D., Norfolk
10th District: John C. Watson, M.D., Alexandria
Richard E. Palmer, M.D., Alexandria
William Dolan, M.D., Arlington

It was explained that the nominations for Council and the State Board of Medical Examiners were presented in the report of the Committee as a means of expediting the business of the House.

It was then moved that the Secretary be instructed

to cast a ballot adopting the nominations. The motion carried unanimously.

The Speaker then requested nominations for two Delegates and Alternates to the AMA. It was explained that the term of Dr. W. Linwood Ball would expire on December 31 and that Dr. Rufus Brittain was an interim appointment by the President. Dr. Allen Barker and Dr. Ball were chosen as Delegates and Dr. Russell Buxton and Dr. Kinloch Nelson as Alternates. Dr. Brittain was elected to serve as Dr. Archer's Alternate, thereby filling the office vacated by Dr. Barker.

An election was then held to select the General Practitioner of the Year in Virginia, and the honor went to Dr. Baxter I. Bell, Sr., Williamsburg.

Dr. Creecy then introduced the following resolution which was adopted unanimously.

BE IT RESOLVED that the House of Delegates of The Medical Society of Virginia recognize the splendid efforts accomplished by our Host Committee of the 10th District in connection with the 110th Annual Meeting, and

BE IT FURTHER RESOLVED that this body extend thanks to the Staff of the Hotel Shoreham in helping make this meeting a most pleasant one.

The following resolution, introduced by Dr. King, was adopted unanimously.

WHEREAS, God Almighty in His infinite wisdom has removed from our midst our friend and colleague, Frank Albert Farmer, M.D., and

WHEREAS, this Council of The Medical Society of Virginia was privileged to have had him as a member at the time of his passing, and

WHEREAS, he had made outstanding contributions to the work of the Society over a period of many years, and

WHEREAS, it is the desire of this Council to take especial note of his meritorious service,

NOW, THEREFORE, BE IT RESOLVED, that we pause in our deliberations to recognize the devoted and distinguished services that he had rendered to this Society, and

FURTHERMORE, that a copy of this resolution be forwarded to his family and be made a part of the permanent record of this Society.

Dr. McCarty called for a standing vote of appreciation on the manner in which Dr. Hundley had conducted the meeting of the House. A rising vote was promptly recorded.

There being no further business, the meeting was adjourned.

ROBERT I. HOWARD
Executive Secretary

Approved:
James D. Hagood, M.D.
President

Life Members—Fifty Year Club—1957

William Nicholas Botts, M.D., Big Stone Gap
John E. Cole, M.D., Fredericksburg
Jay Clarence Coulter, M.D., Charlottesville
John William Devine, M.D., Lynchburg
Elam Adolphus Drum, M.D., Richmond
William Flegenheimer, M.D., Guinea
Edward Lewis Johnson, M.D., Bedford
Henry Vernon Johnston, M.D., Pungo
James Claude Moore, M.D., Keen Mountain
Wade Cleveland Payne, M.D., Haymarket
Frank Cushing Pratt, M.D., Fredericksburg
Charles Warner Robertson, M.D., Stafford C. H.
Alexander Merle Showalter, M.D., Christiansburg
Charles Granville Souder, M.D., Purcellville

Members Whose Deaths Have Been Reported Since 1956 Meeting

Clarence Edward Arnette, M.D.
John Robert Bagby, M.D.
Elisha Barksdale, M.D.
Edgar Allen Baron, M.D.
Richard Phillips Bell, M.D.
Henry Arthur Bonynge, M.D.
Edwin Clinton Bryce, M.D.
Ernest Lee Copley, M.D.
Hubert Dinwiddie Crow, M.D.
Joseph Spencer DeJarnette, M.D.
Murray Dick, M.D.
William Edwin Dickerson, M.D.
Benjamin Blanton Dutton, M.D.
John Roland Ellerson, M.D.
Frank Albert Farmer, M.D.
Frederick Lionel Finch, M.D.
Guy Rothwell Fisher, M.D.
Thomas Griffith Hardy, M.D.
Elliott Clarke Haley, M.D.
James W. Dorsey Haynes, M.D.
William Harrison Higgins, M.D.
Brewster Arthur Hopkins, M.D.
Thomas Edward Hughes, M.D.
Julian Dabney Jackson, M.D.
Ewell Claude Jamison, M.D.
Lawrence Bernard Kelleher, M.D.
Estes Caskie Kidd, M.D.
Marion Norwood King, M.D.
George Walne Leavell, M.D.
Frank Harwood Lukin, M.D.
Cecil Edward Martin, M.D.
Stuart McBryde, M.D.
Thomas David Morewitz, M.D.
James Oscar Mundy, M.D.
Herbert Old, M.D.
George Garland Rhudy, M.D.
John Boyd Stone, M.D.
Sidney Trattner, M.D.
Algernon Keeling Turner, M.D.
William Dunn Walker, M.D.
Fred Jacob Wampler, M.D.
William Royall Warriner, M.D.
Willis Christopher Yeatts, M.D.
Charles Augustus Young, M.D.
Daniel Yuter, M.D.
Francis L. Zinzi, M.D.

Cerebral Palsy

The report of this Committee last year attempted to clarify and publicize facilities available for the treatment of Cerebral Palsy throughout the State. This year through the Crippled Children's Bureau the main emphasis has been in trying to encourage patients to use these facilities rather than jumping from place to place throughout the country with result in confusion and lack of continuity of treatment. Development along the line of special education services has continued and nine special education classes are centers for crippled children throughout the State. The latest one to open is the Fairfax Bell Willard School which opened this Fall and is now in operation. The special education classes or centers are an important service to the Cerebral Palsy patients. Another new facility which will soon be open is the Children's Rehabilitation Center at the University of Virginia. This center will include services to cerebral palsy patients.

The National Orthopaedic and Rehabilitation Hospital, formerly known as the Anderson Orthopaedic Hospital, is expanding its outpatient service along the line of services in rehabilitation facilities particularly occupational therapy, to the Fairfax Crippled Children's Clinic since as yet there is no occupational therapist available at the Fairfax Clinic. The National Orthopaedic and Rehabilitation Hospital will service this clinic on an outpatient basis and training and outlining home programs in occupational therapy for cases that require same and cannot get this service at the Bell Willard school. Rehabilitation surveys are also being conducted on selected patients from this clinic and also from the Northern Virginia Crippled Children's Clinics.

ALLEN M. FERRY, M.D., *Chairman*

Supplemental Report of the Committee on Maternal Health

At a meeting of the Committee on Maternal Health held on July 31, 1957, a sub-committee consisting of Drs. Finch, Ware and Shamburger was appointed to consider proposed changes in the present maternity hospital law, principally for clarification. This sub-committee met at the Society Headquarters in Richmond on September 25, 1957, at which time careful consideration was given to the language of the present statute. The sub-committee was of the opinion that with the exception of the sections dealing with the definition of a Maternity Hospital, and the exemption section, no change should be made in the law.

The definition of a "Maternity Hospital" in Section 1 of the Act (Section 32-147 of the Code, is as follows:

> "(c) 'Maternity hospital' means any place or establishment operated or maintained by any person for the care or treatment of women during pregnancy, or for delivery or for care or treatment within ten days after delivery, whether the place or establishment so maintained be a general hospital, a hospital devoted exclusively to maternity cases, a maternity home or lying-in asylum, or a private home."

The sub-committee was of the opinion that the definition should include only a place or establishment for obstetrical deliveries, and that the requirements for maintaining a maternity hospital should not be applicable where the medical service rendered consists of pre-natal or post partum care only. The sub-committee recommended to the full Committee that the definition of "Maternity Hospital" be changed to read as follows:

> "'Maternity hospital' means any place or establishment operated or maintained by any person where obstetrical deliveries are done, whether the place or establishment so maintained be a general hospital, a hospital devoted exclusively to maternity cases, a maternity home or lying-in asylum, or a private home."

and that Sections 8(2) and 8(3) of the Act (Code, Section 32-161(2) and (3)), which are now as follows:

> "(2) Persons who shall receive and care for women related to such person by blood or marriage only; and
>
> (3) Licensed physicians who receive women at their offices for occasional examination and treatment only."

be rewritten for conformity as follows:

> "(2) Any person who shall receive and care for any woman related to such person by blood or marriage only; and
>
> (3) Any licensed physician who furnishes prenatal or post partum services only."

The recommendations of the sub-committee were submitted in writing to the members of this Committee for consideration, and were approved by a majority of the Committee.

This Committee therefore recommends to the House of Delegates that the proposed changes be approved, and that the Legislative Committee be instructed to prepare the necessary bill or bills for presentation to the General Assembly.

A. TYREE FINCH, M.D., *Chairman*

AUDITOR'S REPORT

OFFICERS AND COUNCILORS
THE MEDICAL SOCIETY OF VIRGINIA
RICHMOND, VIRGINIA
GENTLEMEN:

We have made an examination of the books and records of THE MEDICAL SOCIETY OF VIRGINIA, Richmond, Virginia for the fiscal year ended September 30, 1957, and have prepared therefrom the Balance Sheet, Exhibit "A", Statement of Surplus, Exhibit "B", and Statement of Income, Expenses and Capital Outlay, Exhibit "C". With the exceptions noted in the immediately following paragraph, our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We did not verify the accounts receivable by direct correspondence with the debtors, nor did we verify the accounts payable. It will be noted from the balance sheet that the amounts of these items are not material in relation to the financial position as a whole.

It is our opinion that the Balance Sheet, Exhibit "A", presents fairly the financial position of the Society at September 30, 1957, in accordance with generally accepted principles of accounting. The Statement of Income, Expenses and Capital Outlay, Exhibit "C", is prepared on a basis of cash actually received and disbursed.

Yours very truly,
MITCHELL, WIGGINS & COMPANY
By CHARLES W. ANDERSON
Certified Public Accountant

Balance Sheet
September 30, 1957
Assets

General Fund		
Cash in banks		$ 83,218.96
Accounts receivable:		
Dues from members—Estimated collectible value—1957 dues—50 at $25.00	$ 1,250.00	
Advertising—Virginia Medical Monthly	4,971.21	6,221.21
Investments:		
United States Savings Bonds—Present value (Schedule 1)	$36,671.50	
Certificates of deposit—Bank of Virginia	2,106.12	38,777.62
		$128,217.79
Plant Fund		
Land and buildings—At cost (Schedule 2)		$ 60,892.68
Furniture and equipment: (Schedule 2)		
Estimated value—October 1, 1950	$ 7,048.35	
Cost of acquisitions since October 1, 1950	951.65	8,000.00
		$ 68,892.68

Exhibit "A"

Liabilities and Surplus

General Fund		
Accounts payable:		
Preparation of Medical Journal—September, 1957		$ 2,661.18
Surplus:		
Available for appropriation	$31,388.19	
Appropriated for new office building	94,168.42	
Balance—September 30, 1957 (Exhibit "B")		125,556.61
		$128,217.79
Plant Fund		
Surplus invested in plant assets		$ 68,892.68
		$ 68,892.68

Statement of Surplus
For the Fiscal Year Ended September 30, 1957

Exhibit "B"

General Fund		
Balance—October 1, 1956		$131,594.19
Add:		
Increase in accounts receivable	$ 3,094.04	
Increase in bond interest adjustment	490.50	3,584.54
Total		$135,178.73
Deduct:		
Increase in accounts payable	$ 761.73	
Decrease in certificate of deposit interest adjustment	529.41	
Net cash decrease (Exhibit "C")	8,330.98	9,622.12
Total		$125,556.61
Deduct:		
Unexpended appropriation—New office building		94,168.42
Unappropriated balance—September 30, 1957		$ 31,388.19
Appropriated for new office building:		
Funds appropriated	$120,000.00	
Deduct:		
Expended for land	$22,706.58	
Expended for building (Architects' fees)	3,125.00	25,831.58
Appropriated balance—September 30, 1957		94,168.42
General Fund Surplus—September 30, 1957 (Exhibit "A")		$125,556.61
Plant Fund		
Balance—October 1, 1956		$ 43,061.10
Add: Expended for land		22,706.58
Expended for building (Architects' fees)		3,125.00
Balance—September 30, 1957 (Exhibit "A")		$ 68,892.68

Statement of Income, Expenses and Capital Outlay
For the Fiscal Year Ended September 30, 1957

Exhibit "C"

	Actual	Budget
Gross Income		
Membership dues	$53,363.44	
Interest on investments	1,925.82	
American Medical Association	367.43	
Virginia Medical Monthly:		
Advertising	$33,939.28	
Subscription—Non-members	375.50	34,314.78
Total	$89,971.47	
Expenses		
Executive office:		
Salaries	$24,174.05	$24,000.00
Telephones and telegrams	1,269.14	1,500.00
Postage	702.44	900.00
Stationery and supplies	780.37	1,200.00
Office equipment—Repairs and replacement	583.53	800.00

Building maintenance and repairs—Net	1,168.83	2,600.00
Convention expense	(4,479.87)	1,000.00
Council expenses	1,746.53	2,500.00
Delegates and executive assistant to A.M.A.	1,493.31	1,825.00
President's expenses	397.77	1,000.00
Traveling expenses	978.87	2,000.00
Preparation and distribution of medical journal	29,015.55	26,000.00
Scientific exhibits	2,207.00	2,500.00
Department of clinical and medical education		1,000.00
Legislative committee	2,975.00	1,500.00
Walter Reed commission	8.00	300.00
Woman's auxiliary	100.00	100.00
Membership dues—Affiliated agencies	115.00	150.00
Editor—Virginia Medical Monthly	600.00	600.00
History of Medicine in Virginia	26.25	
Special appropriations:		
Virginia Council Health and Medical Care	2,000.00	2,000.00
Virginia Medical Education Foundation	3,000.00	3,000.00
National Society on Medical Research	150.00	150.00
Jamestown Festival	1,500.00	1,500.00
Rural Health Subcommittee	500.00	500.00
Student—American Medical Association	100.00	200.00
Social security taxes	386.84	500.00
Miscellaneous	461.88	800.00
TOTAL—EXECUTIVE OFFICE	$71,960.49	$80,125.00
Public Relations department:		
Conference expenses	$ 104.10	$ 100.00
Radio and press	391.78	600.00
Literature and bulletins	14.50	500.00
Exhibits		100.00
Miscellaneous projects		100.00
TOTAL—PUBLIC RELATIONS DEPARTMENT	$ 510.38	$ 1,400.00
TOTAL EXPENSES	$72,470.87	$81,525.00
EXCESS OF INCOME OVER OPERATING EXPENSES	$17,500.60	
CAPITAL OUTLAY		
Land—New office building	$22,706.58	
Building—Architects' fees	3,125.00	
TOTAL CAPITAL OUTLAY	$25,831.58	$120,000.00
EXCESS OF EXPENSES AND CAPITAL OUTLAY OVER INCOME (Exhibit "B")	$ 8,330.98	

FIXED ASSETS
September 30, 1957

SCHEDULE 2

PLANT FUND

LAND AND BUILDINGS—At cost		
Windsor Farms, Richmond, Virginia:		
Land	$22,706.58	
Office building (Architects' fees)	3,125.00	$25,831.58
Office building—1105 West Franklin Street, Richmond, Virginia		34,061.10
Walter Reed House, Belroi, Virginia		1,000.00
TOTAL LAND AND BUILDINGS		$60,892.68
OFFICE FURNITURE AND EQUIPMENT		
Estimated insurable value at October 1, 1950		$ 7,048.35
Purchased during the year ended September 30, 1951:		
Adding machine	$ 100.00	
Addressograph-Multigraph stand	127.50	
Protectograph—Check writer	110.30	
Typewriter	156.20	
File cabinets (2)	71.50	
Vacuum cleaner	69.95	
Desks and chairs (2)	316.20	951.65
TOTAL OFFICE FURNITURE AND EQUIPMENT		$ 8,000.00
TOTAL FIXED ASSETS (Exhibit "A")		$68,892.68

FINANCIAL CONDITION

The financial condition of the Society at September 30, 1957, is shown in the Balance Sheet, Exhibit "A", on the accrual basis. A summary thereof is presented as follows in comparison with the financial condition for the two preceding years.

ASSETS	9-30-57	9-30-56	9-30-55
Cash	$ 83,218.96	$ 82,569.94	$ 71,316.46
Accounts receivable	6,221.21	3,127.17	3,409.64
Investments	38,777.62	47,796.53	46,081.03
Land, buildings and equipment	68,892.68	43,061.10	43,061.10
TOTAL—ALL FUNDS	$197,110.47	$176,554.74	$163,868.23
LIABILITIES, SURPLUS AND FUND BALANCE			
Liabilities:			
Accounts payable	$ 2,661.18	$ 1,899.45	$ 1,883.55
Surplus:			
General fund	125,556.61	131,594.19	118,923.58
Fund balance:			
Plant fund	68,892.68	43,061.10	43,061.10
TOTAL—ALL FUNDS	$197,110.47	$176,554.74	$163,868.23

Analyses and explanation of the more important balance sheet items follow:

CASH—$83,218.96

Recorded cash receipts were accounted for by deposits in the banks and disbursements were supported by properly signed and endorsed paid checks. Balances on deposit at September 30, 1957, were confirmed by direct correspondence with the banks as follows:

First and Merchants National Bank—Checking account	$45,538.12
First and Merchants National Bank—Saving account	7,127.56
Bank of Virginia—Savings account	8,196.31
Southern Bank and Trust Company—Savings account	1,107.42
Franklin Federal Savings and Loan Association—Savings account	10,609.43
Richmond Federal Savings and Loan Association—Savings account	10,640.12
TOTAL	$83,218.96

INVESTMENTS—$38,777.62

United States Savings Bonds, as shown in Schedule 1, were verified by inspection of the securities held in a safe deposit box at First and Merchants National Bank, Richmond, Virginia. They are shown in the balance sheet at their current redemption value.

Certificates of deposit were verified by direct correspondence with the Bank of Virginia.

FIXED ASSETS—$68,892.68

Details of the fixed assets carried in the Plant Fund are shown in Schedule 2. No indebtedness against these assets was disclosed by the records. During the fiscal year ended September 30, 1957, $120,000.00 was appropriated for the purpose of purchasing a land site and erecting a building to house the Society's offices. Of this amount $25,831.58 has been expended. A parcel of land was purchased in Windsor Farms, Richmond, Virginia, for $22,706.58 and $3,125.00 was disbursed to the architects.

OPERATIONS

The income, expenses and capital outlays for the fiscal year ended September 30, 1957, are shown in Exhibit "C", prepared on the cash receipts and disbursements basis. A summary of income, expenses and capital outlays in comparison with that of the two preceding years is presented as follows:

	Fiscal Year Ended 9-30-57	9-30-56	9-30-55
INCOME			
Membership dues	$53,363.44	$51,257.85	$48,923.83
Medical monthly publication	34,314.78	24,251.73	21,674.26
Other income	2,293.25	4,169.80	1,825.64
TOTAL	$89,971.47	$79,679.38	$72,423.73
EXPENSES			
Executive office	$71,960.49	$63,572.69	$51,037.80
Public relations department	510.38	1,483.21	2,397.80
TOTAL	$72,470.87	$65,055.90	$53,435.60
INCOME OVER EXPENSES	$17,500.60	$14,623.48	$18,988.13
CAPITAL OUTLAY	$25,831.58	$ -	$ -
EXPENSES AND CAPITAL OUTLAY OVER INCOME	$ 8,330.98	$ -	$ -

IN GENERAL

The bookkeeping records were found to have been kept in a satisfactory manner.

Insurance in force at September 30, 1957, determined from policies on file, was as listed below:

FIRE	
Office furniture and fixtures	$ 6,000.00
Building—1105 West Franklin Street, Richmond, Virginia	26,000.00
Walter Reed House, Belroi, Virginia	2,000.00
LIABILITY—OWNER'S, LANDLORD'S AND TENANT'S	
Bodily injury	$25,000.00-$50,000.00
Property damage	5,000.00
FIDELITY BONDS	
Executive Secretary-Treasurer	$ 5,000.00
Secretary	5,000.00
PERSONAL PROPERTY FLOATER	
All risk—Camera	$ 400.00

INVESTMENT BONDS
September 30, 1957

SCHEDULE 1

BONDS	SERIES	NO. BONDS	DATED	DUE	VALUE AT MATURITY	COST	VALUE AT 9-30-56	VALUE AT 9-30-57
U. S. Savings	F	7	11-1-45	11-1-57	$ 7,000.00	$ 5,180.00	$ 6,615.00	$ 6,860.00
U. S. Savings	F	1	3-1-46	3-1-58	500.00	370.00	472.50	490.00
U. S. Savings	F	10	3-1-46	3-1-58	10,000.00	7,400.00	9,450.00	9,800.00
U. S. Savings	F	6	10-1-49	10-1-61	3,000.00	2,220.00	2,505.00	2,583.00
U. S. Savings	J	13	5-1-55	5-1-67	6,500.00	4,680.00	4,738.50	4,823.00
U. S. Savings	J	11	12-1-55	12-1-67	11,000.00	7,920.00	7,964.00	8,085.00
U. S. Savings	J	1	12-1-55	12-1-67	500.00	360.00	362.00	367.50
U. S. Savings	J	1	1-1-56	1-1-68	1,000.00	720.00	724.00	735.00
U. S. Savings	J	2	2-1-56	2-1-68	2,000.00	1,440.00	1,448.00	1,470.00
U. S. Savings	J	2	7-1-56	7-1-68	2,000.00	1,440.00	1,440.00	1,458.00
					$43,500.00	$31,730.00	$35,719.00	$36,671.50

(Exhibit "A")

Brief Report on AMA Chest X-ray Survey.

The National Tuberculosis Association and its medical section, the American Trudeau Society, in cooperation with the American Medical Association, provided chest x-rays for physicians attending the American Medical Association's annual meeting in New York City, in June.

Of the 720 x-rays taken, 550 were negative, 40 showed suspected tuberculosis, 34 showed other chest diseases, 30 showed cardiovascular disease, and 66 were technically unsatisfactory. The National Tuberculosis Association, its affiliated associations and health departments throughout the country are emphasizing the importance of hospital admission x-ray programs as a specific service to physicians and their patients. The Veterans Administration's experience has shown that this is a good case-finding procedure in tuberculosis with the added dividend of other chest abnormalities.

Information on the Tuberculin Test was also made available at the meeting. Any physician in Virginia desiring a copy of "Tuberculin Testing, Check Your Interpretation", an American Trudeau Society and NTA publication, may get a copy by phoning or writing his local tuberculosis association.

Woman's Auxiliary....

President—Mrs. John R. St. George, Portsmouth
President-Elect—Mrs. Charles A. Easley, Danville
Vice-President—Mrs. Girard Thompson, Chatham
Mrs. George Brooks, Richmond
Mrs. Robert Detwiler, Arlington
Recording Secretary—Mrs. James Grinels, Richmond
Corresponding Secretary—Mrs. Howard Kruger, Norfolk
Treasurer—Mrs. Wyndham B. Blanton, Jr., Richmond
Publication Chairman—Mrs. Paul Pearson, Warsaw

Thirty Fifth Annual Convention

The thirty fifth annual meeting of the Woman's Auxiliary to The Medical Society of Virginia convened in the Palladian Room, Hotel Shoreham, Washington, D.C. on October 29, 1957 at 9:15 A.M. with Mrs. Lee S. Liggan, of Irvington, presiding.

The meeting was called to order by Mrs. Liggan and the Invocation was given by Mrs. Hawes Campbell. The Pledge of Allegiance to our National Flag and the Pledge of Loyalty to the Woman's Auxiliary to the American Medical Association were said in unison. The Address of Welcome was given by Mrs. James M. Moss of Alexandria, followed by the Response from Mrs. Henry R. Bourne, President of the Danville-Pittsylvania Auxiliary.

The Roll was called by the Secretary with 23 Officers and Committee Chairmen present. Representatives from the County Auxiliaries were:

Alleghany-Bath	10
Alexandria	6
Arlington	8
Danville-Pittsylvania	3
Fairfax	5
Hopewell	0
Lynchburg	0
Mid-Tidewater	3
Norfolk	8
Northampton Accomac	0
Northern Neck	7
Old Belt	3
Petersburg	3
Portsmouth	2
Richmond	16
Rockingham	1
Smyth	1
Southwestern	6
Tazewell	1
Tri-County	0
Warwick-Newport News	4
Wise	2

Motion was made, seconded and carried that the reading of the minutes of the 1956 Convention be dispensed with and that they be approved as accepted by the Reading Committee appointed at the Pre-Convention Board Meeting October 16, 1956.

Mrs. Glenn W. Phipps read the following Resolutions for Mrs. Fletcher J. Wright, Sr.:

> The members of the Woman's Auxiliary to The Medical Society of Virginia, fully cognizant of the omniscience of Almighty God and trusting in His goodness and divine love, do in humility and devotion most earnestly desire to pay tribute to a beloved and esteemed friend and colleague, Mrs. Fletcher J. Wright, Sr.
>
> Any true estimate of Mrs. Wright's personality must necessarily emphasize her loyalty. Her unfailing faithfulness to her church, her unselfish loyalty to her friends, and utter devotion to her family were well known. Her dedication to every responsibility placed upon her was accompanied by a cheerfulness of manner that endeared her to all who were privileged to work with her.
>
> Through the years this organization depended upon her capable leadership and relied on her sound judgment. In the hearts of the members of the Medical Auxiliary her vital spirit will ever be cherished among their happiest memories.
>
> The members of the Woman's Auxiliary to The Medical Society of Virginia extend to her family their heartfelt condolence and deepest sympathy.

Mrs. Maynard Emlaw conducted a most impressive In Memoriam service for Mrs. Meade C. Edmunds and Mrs. Glenn G. Foster.

Mrs. Liggan presented our guests, Mrs. Paul C. Craig, President of the Woman's Auxiliary to the American Medical Association, and Mrs. Oscar W. Robinson, President of the Woman's Auxiliary to the Southern Medical Association.

Mrs. Liggan gave the President's report. Mrs. McCoy moved that we accept the President's report and give her a vote of thanks for the fine work which she has done. Motion carried.

Reports of the Officers, Chairmen of Standing and Special Committees and County Auxiliary Presidents were presented.

Mrs. W. F. Schmidt gave a report of the Annual Convention of the Woman's Auxiliary to the Ameri-

can Medical Association held in New York, June 3-7, 1957.

Mrs. Emanuel Newman, Chairman of Registration, reported a total registration of 279.

The following recommendation were made by the Board of the Auxiliary, read by the Recording Secretary, who moved the adoption of the resolutions:

1. The recommendation from the Finance Committee that the Convention approve the action taken by the Board at the mid-winter Board meeting.
2. That $100.00 travel expense and $60.00 for postage and telephone be restored to the President.
3. That the cost of printing Convention Reports be paid to the amount of $90.00.
4. That the practice of printing names of Officers and Committee Chairmen on Auxiliary stationary be discontinued.
5. That the County Auxiliary Presidents will not receive stationary from the State Auxiliary in the future.
6. That the annual State Auxiliary dues be increased $1.00 per member.

Motions seconded and carried.

The recommendation from the Board that the Auxiliary not pay the expenses of our President to meetings of the Woman's Auxiliary to the American Medical Association was defeated.

Mrs. Walter Porter moved that the President be allowed to use her allowance at her own discretion. Motion carried.

The Budget for 1957-58 was presented by Mrs. Kalford W. Howard Chairman of the Finance Committee. Budget accepted as presented.

Report of Revisions Committee—Mrs. Henry R. Bourne moved that the re-written By-Laws as approved by the Board at the Pre-Convention Board Meeting be accepted by the Convention. Motion carried.

Mrs. Rufus Brittain presented the Courtesy Resolutions as follows:

> Madam President, members of the Auxiliary to The Medical Society of Virginia and honored guests. The Committee on Courtesy Resolutions extends the appreciation of its members to the Fairfax, Arlington and Alexandria Auxiliaries, especially to the able Chairmen Mrs. James B. Gilbert and Mrs. Thomas McGavin, for this well planned and smoothly expedited meeting. We would especially thank you for persuading the trees to hold over their autumnal glory for our visit and for stabilizing your uncertain weather at such a pleasant point. We thank Mrs. Emanuel Newman and Mrs. Thomas Haggerty for the ease and dispatch of the registration and for the warm welcome of the Coffee Hour we thank the hostess Auxiliaries.
>
> To the entire committee on local arrangements we offer our gratitude for their time consuming efforts and our appreciation and pleasure therefrom.
>
> For the door prizes at the luncheon we are grateful to Woodward and Lothrop to Lady Hamilton to Kann's and the C. K. Hecht Co. Luncheon Favors are by the couresy of Peoples Drug Company and the Drug Fair.

Mrs. James Stone gave a history of the Auxiliary to The Medical Society of Virginia. A motion was made, seconded and carried that the history be incorporated in the Auxiliary Hand Book with a list of past presidents.

Mrs. Liggan presented beautiful red roses to the past presidents attending the Convention, namely, Mrs. Hawes Campbell, Mrs. James Stone, Mrs. Thomas Hunnicutt, Jr., Mrs. Kalford Howard, Mrs. Maynard Emlaw, and Mrs. Mervin Glover.

Mrs. Malcolm Harris, Chairman of the Nominating Committee read the slate of Officers for 1957-58.

President—Mrs. John St. George
President-Elect—Mrs. Charles A. Easley
First Vice-President—Mrs. Girard Thompson
Second Vice President—Mrs. George Brooks
Third Vice President—Mrs. Robert Detwiler
Recording Secretary—Mrs. James Grinels
Corresponding Secretary—Mrs. Howard Kruger
Treasurer—Mrs. Wyndham Blanton, Jr.
Board Members—Mrs. Lee S. Liggan
Mrs. J. L. DeCormis
Mrs. Maynard Emlaw

The slate was accepted as presented.

The meeting recessed at 12:30 P.M. to reconvene at 1:00 P.M. in the Blue Room of the Shoreham Hotel.

The luncheon meeting was called to order by the President, Mrs. Lee S. Liggan, and Mrs. Hawes Campbell gave the Invocation. Following luncheon a beautiful Fashion Show was staged by Lady Hamilton.

Mrs. Liggan introduced Mrs. Paul C. Craig, President of the Woman's Auxiliary to the American Medical Association, who spoke on the projects

which the Auxiliary is putting special emphasis on in 1957-58.

1. Todays Health
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3. Legislation
4. Safety

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(Mrs. James R. Grinels)
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Chairman, Press and Publicity

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Dolores E. Schmidt (Mrs. W. F.)
Publicity Chairman

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The program chairman, Mrs. Leonard Booker, presented the guest speaker, Dr. H. J. Haynes, Director of the Fredericksburg Area Mental Hygiene Clinic, who spoke on "Activities of Operations of the Mental Health Clinic in Fredericksburg", which covers about nine counties.

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President's Message . . . .

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These topics will be many, as is already evident. It is my intention, whenever possible, to keep the membership informed of these problems. Some changes have been made in committees in an effort to increase their efficiency. Some new committees are being constructed as directed by the House of Delegates. It will take a little time to get all of these things in order. I have much faith in the ability of our collective minds to accomplish a great deal when we so desire, and I believe this year may well be a year of great decision for us.

In spite of the well arranged and well managed meeting we have just had, it is apparent that the format of this Annual Meeting needs some adjustments. The scientific sessions should not, under any circumstances, be reduced in either quality or quantity. The majority of the membership comes to the meeting for the medical knowledge that can be obtained there. But I believe the business sessions of the Society can be better arranged. This I will try to work out with the Committee on Arrangements for next year's meeting.

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Lastly, let me thank you, in advance, for your help and assistance as I may request it. The organization can only be as good as we collectively make it.

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Editorial....

The Medical Bulletin of Northern Virginia

ONE OF THE many worthwhile experiences at The Medical Society of Virginia meeting in Washington this October was the opportunity to become acquainted with The Medical Bulletin of Northern Virginia. Dr. Albert V. Rigsbee is Editor and Albert Leitch, a newspaperman for many years, is Editorial Assistant and printer of this very professional publication which now is in its fourth year. The Bulletin is published monthly and the October 28 issue contained twenty pages. There were numerous photographs and an excellent drawing by Mrs. Nancy Wehl, a former fashion and medical illustrator. The large and active Editorial and Advisory Committees must be a source of aid and comfort to the Editor. The income from advertising covers the cost of publication and it is distributed free to the physicians of the Tenth District.

This unusual publication, as far as the Editor of the Bulletin is aware, is the first medical newspaper in America. A newspaper format was chosen because of the sense of urgency conveyed by this news medium. This form recommended itself as the quickest method of providing information to the reader and for the ease with which a number of stories may be started on page one. This type of presentation also facilitates the copying of items by local newspapers after they have appeared in the Bulletin. Nothing is lost in the transfer if the item already is in newspaper form.

Medical and related society meetings are listed. This has been found to increase the attendance. Personal news items, always popular, are featured. An effort is made to carry medical items of all types relating to the Tenth District. While the Bulletin is the official publication of the Arlington County Medical Society, it carries all the Alexandria and Fairfax Medical Society news that the correspondents from these organizations can forward. Probably this publication's greatest contribution is the dissemination of information between the three component societies of the Tenth District with resulting unification of the physicians of this area.

It is the hope of the Virginia Medical Monthly that the Bulletin will be the first of other similar publications in the State. The medical societies in our rapidly growing Hampton Roads Area might pool their energies and talents to produce a publication of this type for it would prove of real value in bringing together the physicians of the dispersed Norfolk-Princess Anne-Portsmouth-Newport News-Warwick-Hampton-Cape Charles district.

H. J. W.

Current Currents

MEMBERS ARE URGED to read the minutes of Council and the House of Delegates published in this issue. The complete auditor's report is also published and is "must" reading for every member interested in the management of the Society and its financial standing.

A NEW TAX RULING by the Internal Revenue Service may mean that physicians practicing as an association are entitled to the same tax deferment privileges as corporation employees with regard to annuities. A federal court of appeals has ruled, in the famous Kintner Case, that a group of physicians, formally associated as partners, would be entitled to tax treatment as a corporation after they banded together in an association. Thus, it appears that IRS will not deny the favored tax status to an association of physicians simply because indications are that the association was formed to obtain pension plan benefits for members.

Should this policy be maintained by IRS, the effect will be to allow physicians forming our association (in line with criteria yet to be established) to enjoy approximately the same annuity advantages they would under the Jenkins-Keogh Bill. Sponsors would have to meet two tests: the association would have to qualify for federal tax benefits, while at the same time avoiding the charge, under state law, of engaging in the corporate practice of medicine.

The criteria for testing the existence of an association taxable as a corporation will be published as soon as it is released.

A SOCIAL SECURITY FOLDER has been mailed to all physicians by the American Medical Association. The folder is attractive and easy to read, and lists eight reasons why the profession should not accept social security on a compulsory basis. The pamphlet, entitled "Which Way?", is part of a stepped-up information program explaining the reasons for the profession's position on this issue.

The pamphlet requests that physicians study the eight basic reasons and "evaluate them carefully in making your decisions as to 'Which Way' the medical profession should turn".

This material is quite timely—particularly since a number of component societies have recently held programs on social security, and at least two have conducted their own surveys on the subject.

A COMMITTEE OF 24 MEMBERS has been appointed to advise the Public Health Service on operations for the National Health Survey, which will release some of its findings next year. The survey was established by Congress in 1956. Committee members include physicians, nurses, Public Health officials, pharmaceutical executives, welfare leaders, educators and life insurance executives. This entire operation is being watched closely by the profession.

FEDERAL SPENDING in the health field may be reduced after the current fiscal year. Under Secretary John Perkins of the Department of Health, Education and Welfare, recently expressed his views on the subject. He said, in part: ". . . there are now other circumstances that suggest an objective reevaluation of the grant system. Think of the dramatic change in the national budget that has been brought about by war and cold war . . . Federal grants-in-aid have proven to be an effective means . . . for smoothing out, at least on a minimum basis, the variations in wealth among the states. However, I am suggesting that the realities of today's world and its demands on the federal budget require that the states and local communities assume an increasingly greater part of both the burden and the challenge presented by the public health needs of the future."

THE 20th EDITION of the AMA Directory, containing complete data on 260,000 physicians in the United States and Canada, is now going to press and will be ready for shipment on September 1, 1958.

This 1958 edition will contain more than 100,000 changes of address and biographical data on an additional 19,000 new physicians. Included also will be 14,000 changes in specialties and certifications by the Examining Boards for Medical Specialties.

Many physicians are already ordering copies for early delivery. The pre-publication price for orders before January 1, 1958, is: United States and Possessions, $30.00; outside U.S. and Possessions, $33.00.

A price increase will take effect after January 1. The rates will then be $35.00 and $38.00.

VIRGINIA PHYSICIANS have recently received sample polio reminders for patients who have not started their polio vaccination series or received their final shots. Members are urged to complete the special form furnished with the reminders and order free as many reminder cards as needed.

The AMA hopes, by working directly with individual physicians, to reach those 37 million Americans under 40 who have not yet started their series and the 44 million others who still need second and third inoculations.

Physicians across the country cooperated admirably during last year's campaign, and their success is shown in the 70 per cent drop in paralytic polio cases. Vaccine supplies are now quite plentiful and physicians are urged to renew the campaign to inoculate as many of their patients as possible.

COMPONENT MEDICAL SOCIETIES will soon receive a booklet entitled "1957 Nationwide Survey on County Medical Society Activities". The booklet contains information on such component society programs as emergency call systems, fee schedules, insurance, grievance committees, dues, etc. Additional copies may be secured from the AMA Council on Medical Service.

Society Proceedings . . . .

Fairfax County Medical Society.

Dr. Thomas E. Haggerty, Falls Church, has been installed as president of this Society, and Dr. Thomas O'Brien, also of Falls Church, has been named president-elect. Dr. William Enos, Fairfax, is vice-president; Dr. Andrew Tessitore, Vienna, secretary; and Dr. Carl Parker, Falls Church, treasurer. Members at Large on the Executive Committee are Drs. Frances Ayers and J. D. Zylman, both of Falls Church.

The Danville-Pittsylvania Academy of Medicine

Had its annual "Ladies' Night" on September 13th at the Danville Country Club and entertained the doctors and their wives with dinner and dance.

The Academy held its regular monthly meeting on October 11th, at which time Mr. J. C. Searles, Field Representative of the Abbott Laboratories, Department of Radiopharmaceuticals, spoke on The Clinical Use of Radioactive Isotopes.

The Northern Virginia Academy of Surgery

Held its annual meeting at the Belle Haven Country Club, Alexandria, on October 1st. The speaker of the evening was Dr. Johnson, head of the Orthopaedic Pathology Department of the Armed Forces Institute of Pathology.

New officers elected at the business meeting were Dr. W. Leonard Weyl, President; Dr. Michael A. Puzak, Vice President; Dr. Allen M. Ferry, Secretary; and Dr. Charles V. Amole, Treasurer. Elected as Counselors were Drs. Joseph Romness, John Hazel and John Hoyle. Dr. John Alexander, the retiring President, remains on the Executive Committee, *ex officio*. Dr. Henry T. Kulesher was elected to membership in the Academy.

News Notes . . . .

New Members.

Since the list published in the November issue of the Monthly, the following new members have been admitted into The Medical Society of Virginia:

Miriam W. Carmichael, M.D., Richmond
Robert Thomas Cauthorne, M.D., Richmond
Frederick David Gillespie, M.D., North Tazewell
Edward Davis Harris, M.D., Richmond
William Burton Johnston, M.D., Richmond
Ralph Burton Maffey, M.D., Tazewell
Ella Louise Payne, M.D., Charlottesville
William Clark Pole, M.D., Charlottesville
Thomas Allen Ray, M.D., Arlington
Frederick E. Vultee, Jr., M.D., Richmond

The Washington Meeting.

The weather was made to order and the trees were at their height of fall beauty for the annual meeting of The Medical Society of Virginia held at The Shoreham, Washington, October 27-30. In fact, everything would have been almost perfect except for the fact that the "Flu Bug" invaded our population and the attendance was far below that anticipated. Total registration was eleven hundred and sixteen, which included six hundred and forty-one physicians, two hundred and seventy-nine members of the Woman's Auxiliary, and one hundred and ninety-six exhibitors.

In spite of the fact that a fire had damaged the ballroom the week before the meeting and at the last minute the technical and scientific exhibits had to be moved to the garage or "exhibition hall", attendance there seemed to be quite good. There were fifty-six technical exhibits—which as far as is known tops the record. Scientific exhibits were unusually good and awards were made as follows: First Award —The Hands in Arthritis by Dr. Joseph A. Kiesel, Washington, D. C.; Second Award—Reconstructive Surgery of the Hand by Drs. C. C. Coleman, Jr., and Lee B. Brown, Charlottesville; and Third Award—Safety in Operations for Mitral Stenosis by Dr. William L. Jamison, Washington, D. C.

Dr. Baxter I. Bell, Sr., Williamsburg, was chosen as Virginia General Practitioner of the Year.

The following telegram was received from President Eisenhower: "Through Congressman Broyhill, I have learned of the 110th Annual Meeting of The Medical Society of Virginia and I am glad to send greetings to your membership assembled. For over a century your services to the people of Virginia have been rendered in the highest traditions of the

medical profession. Strengthened by this splendid heritage, your organization continues to give essential support to the health of a great community. Best wishes for a memorable meeting.

Dr. Harry Clark Bates, Jr., Arlington, succeeded Dr. James D. Hagood, Clover, to the presidency. Dr. Walter P. Adams, Norfolk, was named president-elect; Drs. J. R. B. Hutchinson, Arlington; Holcombe H. Hurt, Lynchburg; and C. C. Hatfield, Saltville, vice-presidents; and Robert I. Howard, Richmond, executive secretary-treasurer.

The next meeting of the Society will be held in Richmond, October 12-15, 1958.

Dr. Hedges 90 Years Young.

Dr. Halstead S. Hedges, Charlottesville, celebrated his 90th birthday on September 30th—in his office, seeing patients as usual. His office staff and colleagues presented him with a cake in the office in the morning and in the afternoon there was a small celebration at home. The Medical School of the University of Virginia presented him with a citation. The following day some 30 or 40 of his local men friends held a stag party at Bear Rock Camp in Madison County. Dr. Hedges began his practice in 1893 and he shows no sign of slackening his pace.

Dr. Oscar L. Hite,

Richmond, received a citation for "meritorious Christian service" at the annual convocation of Crozer Theological Seminary at Chester, Pa., in October. He was one of eight recipients of the award chosen from throughout the United States.

Dr. Henry B. Mulholland,

Charlottesville, has accepted membership on the National Advisory Arthritis and Metabolic Diseases Council for the term 1957-61. His appointment was announced by Dr. L. E. Burney, Surgeon General of the Public Health Service.

Dr. Allen Pepple

Has been appointed chairman of the division of dermatology and professor of dermatology and syphilology at the Medical College of Virginia.

Dr. Michael Honored.

Dr. Carlton A. Michael, Austinville, who is retiring, was given a surprise party by the Lead Mines Ruritan Club on October 26th. He was presented with a Hi-Fi Console model AF-FM radio and phonograph and several smaller gifts. Dr. Michael came to Austinville in 1921 and became company doctor for the local Bertha Mineral Division of the New Jersey Zinc Company plant in 1930. After his retirement, he will make his home in Blacksburg.

Dr. Mack I. Shanholtz,

State Health Commissioner, has been elected secretary-treasurer of the Association of State and Territorial Public Health Officers.

Dr. Reginald B. Henry, Jr.,

Is now associated with Drs. Walter B. Martin, John Franklin and Robert B. Gahagan in the practice of internal medicine, with offices in the Wainwright Building, Norfolk.

Dr. White to Remain in Nigeria.

Dr. Leta J. White, Petersburg pediatrician, who left in August for two months service in mission hospitals and clinics in Nigeria and the Belgian Congo, will remain for a year. Since working in the mission hospitals, she has found such an acute shortage of doctors and so much sickness that she has agreed to work for a year under the Foreign Mission Board of the Southern Baptist Convention. Dr. White writes there are about 50,000 people to one doctor.

Dr. Raymond Brown,

Gloucester, was guest speaker at a recent meeting of the Ware Junior Woman's Club. His subject was Medical Problems of Gloucester.

Dr. Claude A. Nunnally,

Fredericksburg, has recently been elected to the School Board by the City Council. He succeeds Dr. D. W. Scott, Jr., who resigned as he is moving outside of the city.

Dr. John L. Patterson, Jr.,

Richmond, spoke before the annual meeting of the American Heart Association in Chicago in October. His subject was Circulation and Respiration in the Giraffe and discussed findings last October during a Navy sponsored safari to South Africa.

Dr. Count D. Gibson,

Associate professor of medicine at the Medical College of Virginia, has been named professor of preventive medicine at Tufts University School of Medicine. He begins his duties in January.

National Foundation for Infantile Paralysis.

Dr. Ernest B. Carpenter will serve as chairman of the Medical Advisory Committee for the Richmond-Henrico Chapter of the National Foundation for Infantile Paralysis. Others on the committee are

Drs. W. H. Park, Weir M. Tucker, Count D. Gibson, and William G. Gill. All are from Richmond.

Wanted.

Mental Hospital Physician. Merit increases. Vacation and sick leave with pay. Retirement benefits.

Chief of Service—Four years of psychiatric experience, at least two of which must have been in a mental hospital. State license or eligibility therefor. Starting salary $10,992.00 per year.

Staff Physician—Two years of psychiatric experience, at least one of which must have been in a mental hospital. State License or eligibility therefor. Starting salary $10,032.00 per year.

Apply to Superintendent, DeJarnette State Sanatorium, Staunton, Virginia. *(Adv.)*

Desires Association.

Internist—33; board eligible; University hospital trained; Virginia license; interests endocrinology and metabolic diseases; desires association with internist, group or hospital. Write #250, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. *(Adv.)*

Obituaries . . .

Dr. Robert Finley Gayle, Jr.,

Prominent Richmond psychiatrist, died November 4th after a brief illness. He was a native of Norfolk County and sixty-five years of age. Dr. Gayle graduated from the Medical College of Virginia in 1915 and had been engaged in the private practice of psychiatry in Richmond since 1919. He had been chief of the Department of Psychiatry at the Medical College of Virginia and the Psychiatric and Neurological Division of its hospital since 1939. Dr. Gayle had also been a member of the State Hospital Board since 1939 and a member of the Governor's Advisory Board for Mental Hygiene since 1920.

Dr. Gayle was president of the American Psychiatric Association in 1955, having previously served four years as secretary. He was a past president of the Richmond Academy of Medicine, the Southern Psychiatric Association and the Virginia Neuropsychiatric Society. He had been an active member of The Medical Society of Virginia since 1919.

Dr. Gayle is survived by his wife, two sons, a daughter, and two stepdaughters.

Dr. Douglas VanderHoof,

Widely known Richmond physician, died October 31st at the age of seventy-seven. He was a native of New York and a graduate from Johns Hopkins Medical School in 1905. Dr. VanderHoof was a member of the faculty of the Medical College of Virginia from 1906 to 1914 and was professor of medicine and physician-in-chief to the hospital division from 1914 to 1927. He was made emeritus professor of medicine in 1929 and served on the Board of Visitors from 1929 to 1953.

Dr. VanderHoof was very prominent in civic affairs. During World War I he was assigned to remain in Richmond as an essential medical instructor and served as a member and secretary of the Medical Advisory Board. During World War II, he was consulting physician for the Henrico County Selective Service Board. Dr. VanderHoof was made a Life Member of The Medical Society of Virginia in 1955, having joined in 1907.

His wife survives him.

Dr. William McMath Revercomb,

Clifton Forge, died November 8th, at the age of seventy-nine. He was a native of Highland County and a graduate of the Medical College of Virginia in 1904. Dr. Revercomb had practiced at Clifton Forge since 1909 and was a member of the medical staff of the Chesapeake and Ohio Hospital.

Dr. Revercomb was a Mason, a member of Knights Templar and the Shrine. He was a Life Member of The Medical Society of Virginia, having joined in 1904.

His wife and two daughters survive him.

Dr. Richard Moncure Reynolds,

Widely known Norfolk physician, died October 29th, at the age of fifty-seven. He was a graduate of the Medical College of Virginia in 1929 and had practiced in Norfolk since that time.

Dr. Reynolds was past president of the Ocean View Lions Club and the Tidewater Academy of General Practice. He was chairman of the committee on arrangements for the annual meeting of the Virginia Academy of General Practice to be held at Virginia Beach in 1958. Dr. Reynolds had been a member of The Medical Society of Virginia since 1934.

His wife survives him.

Dr. Francis Louis Zinzi,

Arlington, died October 24th, following a heart attack. He was forty-three years of age and a graduate of Georgetown University School of Medicine in 1940. Dr. Zinzi had been a member of The Medical Society of Virginia for three years.

Lucretia Martin,

Wife of Dr. Walter B. Martin, Norfolk, died October 8th after a lingering illness. The Martins were married in 1917 and celebrated their 40th wedding anniversary shortly before the onset of Mrs. Martin's terminal illness.

Dr. Hughes

Dr. Thomas Edmond Hughes was born at Amissville, Rappahannock County, Virginia, January 20th, 1884, the son of John Spindle Hughes and Capitola Luttrell Hughes.

His early life was spent in Rappahannock County where he attended public schools and Randolph Macon Academy. He earned a B.A. degree from Richmond College in 1906. After one year at the University College of Medicine, now the Medical College of Virginia, he transferred to the University of Virginia where in 1910 he graduated with an M.D. degree. He served an internship at the James Walker Memorial Hospital in Wilmington, North Carolina, in which state he entered private practice for a short time before accepting a commission in the U. S. Public Health Service. He later resigned his commission to pursue training in his specialty at the Manhattan Eye, Ear and Throat Hospital and continued his training in the New York Eye and Ear Infirmary.

He returned to Richmond where he practiced Otolaryngology independently and as a member of the staff of the McGuire Clinic for over thirty years.

Dr. Hughes never failed to pursue his interests in farming and sports. He was fond of horses and racing and was an active member of the Deep Run Hunt Club. He was a member of the Country Club of Virginia and the Commonwealth Club. In 1905, when a student at Richmond College, he was a member of the track team and was awarded the All Around Athlete Medal.

Professionally, he was an inspiring teacher at the Medical College of Virginia, and his teaching aptitude continued throughout his life. He contributed many important articles to specialty journals. He was President of the Richmond Eye, Ear, Nose and Throat Society, President of the Virginia Society of Ophthalmology, and held membership in the Richmond Academy of Medicine, Medical Society of Virginia, American Medical Association, American Academy of Ophthalmology and Otolaryngology and the American Triological Society.

In 1939 he married Miss Mary Elizabeth Warren of Fauquier County, who survives him.

Because of his great love of farming and out-of-door life, he retired from active city practice to Front Royal, where he maintained an office for limited practice. He spent much of his time caring for a registered herd of Black Angus cattle. It was here, outside of his farm at Delaplane, where the tragic automobile accident which claimed his life occurred April 2nd, 1957.

Dr. Hughes was a doctor's doctor in his professional attainments, a loyal friend to his colleagues, a charming gentleman to his myriad friends, and a wise counselor to his many patients. His broad intellectual interests, ranging from Dr. Freeman's Current Events Club to his scientific interest in breeding cattle, qualified him for designation as a scholar.

THEREFORE, BE IT RESOLVED, that the Richmond Academy of Medicine express its deep appreciation of his life and its profound grief at his passing.

BE IT FURTHER RESOLVED, that a copy of these resolutions be tendered Mrs. Hughes, and that they become a part of the minutes of the Richmond Academy of Medicine.

HUNTER H. MCGUIRE
E. TRIBLE GATEWOOD
JOHN P. LYNCH

Dr. Morewitz

On September 5, 1957, the Warwick-Newport News Medical Society lost one of its devoted and diligent members, Dr. Thomas D. Morewitz.

Dr. Morewitz was born in Baltimore, Maryland, on February 21, 1893. His elementary education was obtained in the Newport News school system and at the age of twenty he received his M.D. degree at the Medical College of Virginia and interned at Saint Vincent's Hospital in Norfolk. In 1919, after being discharged from the Army Medical Corps with the rank of Captain, he returned to Newport News to practice.

Dr. Morewitz devoted his practice almost entirely to the seafaring men of the many nations whose ships brought them to the great port of Hampton Roads. He was a man of few words and firm opinions, but behind this outer veneer was a great love and sympathy for the "under dog" and an untiring sense of duty to serve the medical needs of these men from the far corners of the world.

Dr. Morewitz also served as Newport News City Physician from 1947 to 1951. He was a member of Braxton-Perkins Post of the American Legion and B. P. O. E. 315. He was a charter member of the Rodef Sholem Congregation in Newport News and a member of The Medical Society of Virginia and the American Medical Association.

He was always, in his quiet, modest, unassuming manner, willing to undertake any burden or responsibility for the welfare of his patients. His efforts will be surely missed.

THEREFORE BE IT RESOLVED by the Warwick-Newport News Medical Society that we extend to the bereaved family our deepest sympathy and share with them, the community, and his legion of sea-faring friends from all over the world, in the loss of our colleague and friend.

BE IT FURTHER RESOLVED that these resolutions be spread upon the pages of the minutes of the Warwick-Newport News Medical Society, and that copies be sent to the family and to the Virginia Medical Monthly.

J. W. TANKARD, M.D., *Chairman*
M. L. HORNE, M.D.
BARNES GILLESPIE, M.D.

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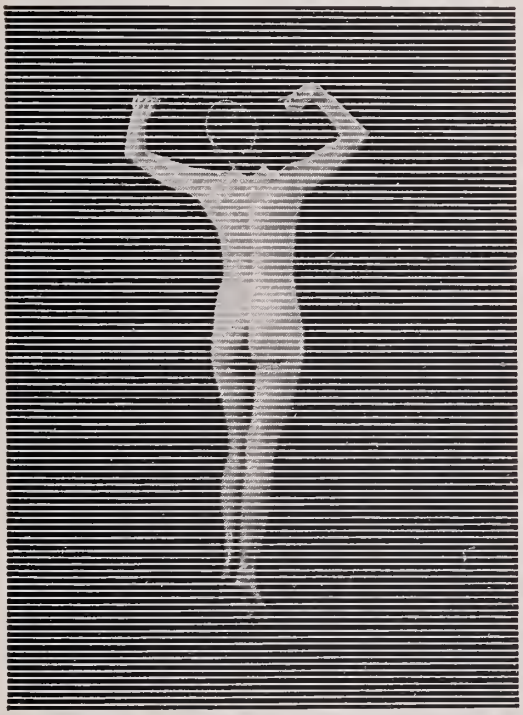
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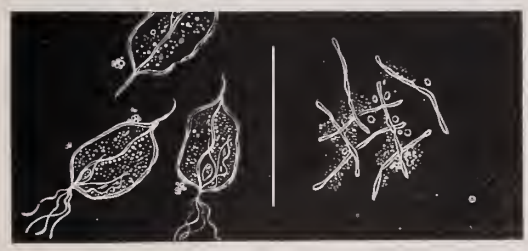
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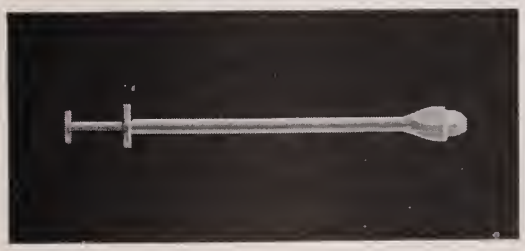
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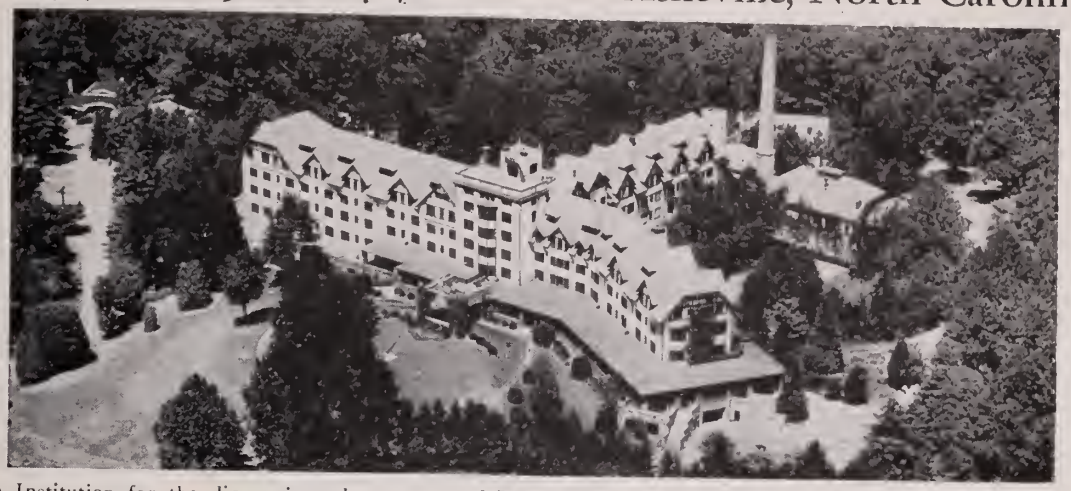
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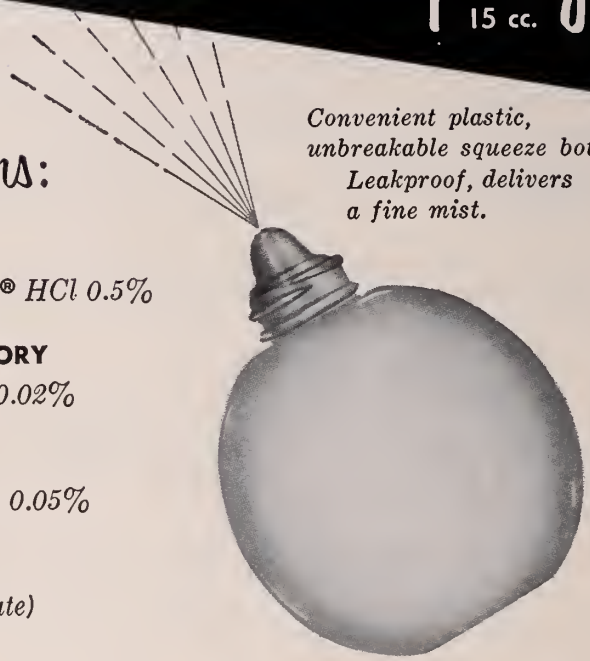
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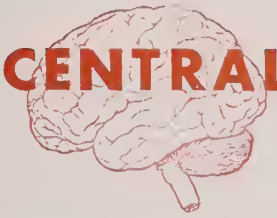
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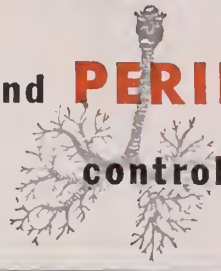
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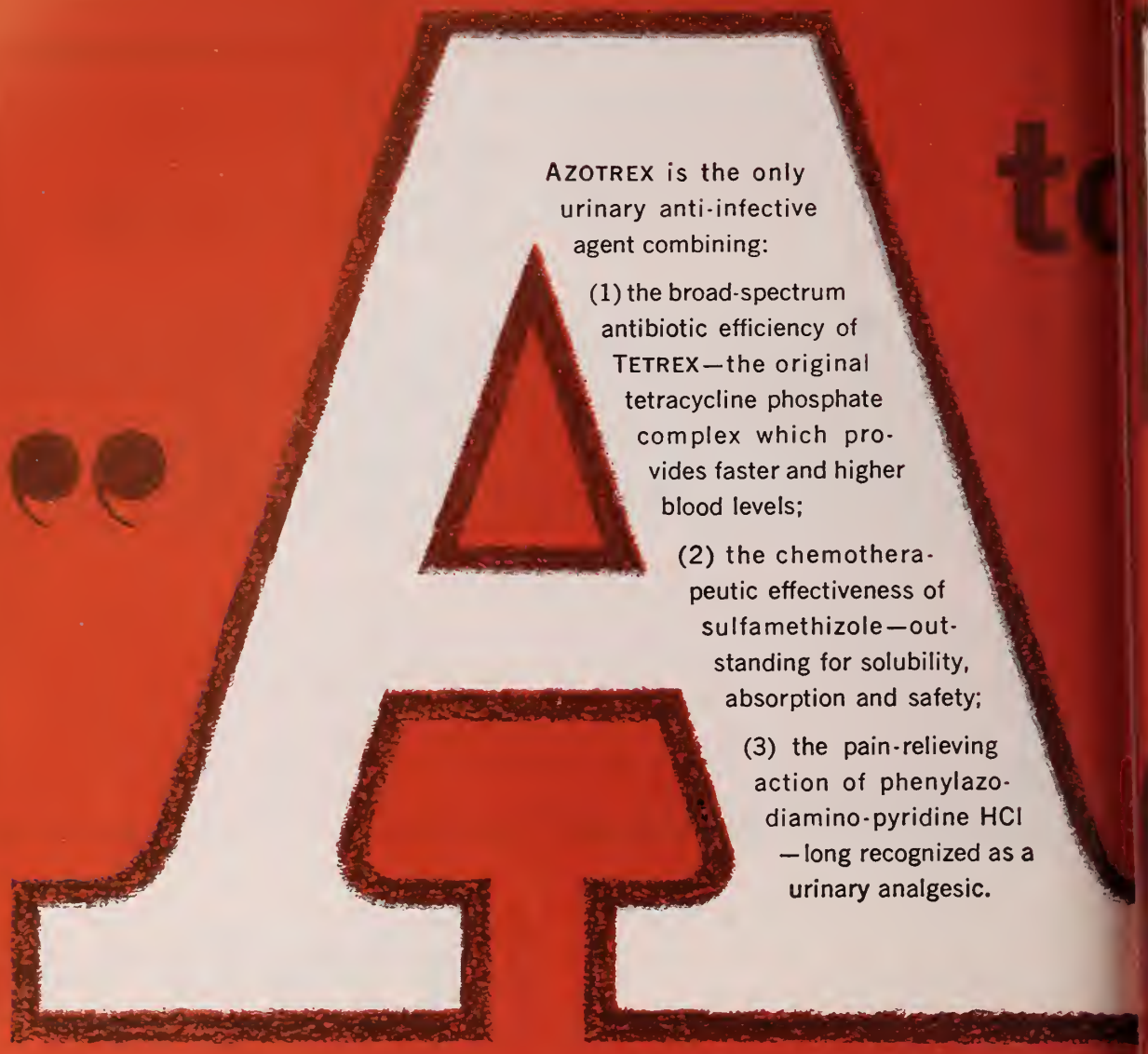
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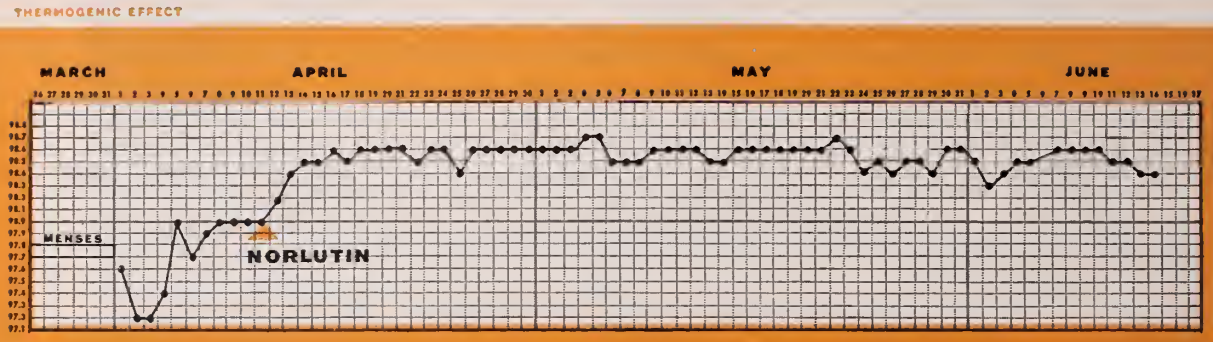
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*Greenblatt, R. B.: *J. Clin. Endocrinol.* 16:869, 1956.

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Author	No. of Cases	Major Improvement	Minor Improvement	No Effect
Haydu[1]	28	22	5	1
Rinehart[2]	25	12	4	9
Freedman[3]	50	43	3	4
Bagnall[4]	108	77	12	19
Bruckner[5]	36	32	0	4
Cohen and Calkins[6]	22	17	3	2
Scherbel et al.[7]	25	9	8	8
Total	294	212 (72%)	35 (12%)	47 (16%)

- Success dependent upon persistent treatment
- Often of benefit where other agents have failed
- Remissions on therapy well maintained
- Remission of 3 to 12 months possible even if treatment is interrupted
- Tachyphylaxis not evident

GENERAL EFFECTS:

- Patient feels better
- Patient looks better
- Exercise tolerance increases
- Walking speed and hand grip improves

LABORATORY EFFECTS:

- E. S. R. may fall slowly
- Hemoglobin level may gradually rise

ANALGESICS AND STEROIDS:

- Requirements usually reduced or eliminated

JOINT EFFECTS:

- Pain and tenderness relieved
- Mobility increases
- Swellings diminish or disappear
- Muscle strength improves
- Rheumatic nodules may disappear
- Even severe or advanced deformity may improve
- *Active* inflammatory process usually subsides
- Joint effusion may diminish

DOSAGE:

Aralen is cumulative in action and requires four to twelve weeks of administration before therapeutic effects become apparent.

Latest information indicates that an initial daily dose of 250 mg. of Aralen phosphate is preferable to the higher doses sometimes recommended. However, if side effects appear, withdraw Aralen for several days until they subside. Reinstate treatment with 125 mg. daily and, if well tolerated, increase to 250 mg. The usual maintenance dose is 250 mg. daily.

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INDICATIONS:

- Rheumatoid arthritis, acute or chronic —with or without adjunctive therapy.
- Spondylitis
- Arthritis associated with lupus erythematosus or psoriasis

THEORY OF ACTION:

Aralen appears to suppress or induce remission of rheumatoid inflammatory processes by inhibiting adenosinetriphosphatase.

HOW SUPPLIED:

Aralen phosphate: 250 mg. tablets in bottles of 100 and 1000.
125 mg. tablets in bottles of 100.

Tolerance:

Aralen is usually well tolerated. Toxic effects are usually mild and to date have been transitory in nature, disappearing completely either on continuance or cessation of therapy or on reduction in dosage.

Gastrointestinal disturbances (e.g. nausea, rarely vomiting, diarrhea, abdominal cramps, anorexia) are frequent manifestations of intolerance. Temporary blurring of vision (due to interference with accommodation) is also relatively frequent.

Pleomorphic skin eruptions (e.g. lichenoid, maculopapular, purpuric), although generally mild, may preclude the use of an optimum dosage schedule. If a skin reaction persists on a reduced dosage schedule, or recurs after reinstitution of treatment with gradually increasing doses, discontinue Aralen till the lesion again disappears and consider resuming treatment with Plaquenil® (brand of hydroxychloroquine).

Less frequently transitory vertigo, headache, lassitude, or neurological disturbances, such as nervousness, irritability, emotional change, and nightmares have been reported. Instances of unexplained slight gradual weight loss as the patient's general health and arthritic condition improved have been mentioned. Occasional instances of bleaching (depigmentation) of the hair have been described.

Although an occasional instance of leukopenia, with normal differential count, has been reported (WBC about 3000), it has not proved troublesome because it has always been reversible on discontinuance, or diminution of the dose. Even spontaneous reversal may occur while full dosage is maintained.

Caution:

Aralen is known to concentrate in the liver and, although hepatic damage has never been reported, the drug should be used with caution in the presence of liver disease. In the presence of severe gastrointestinal, neurological, or blood disorders, the drug should be used with caution or not at all. If such disorders occur during the course of therapy, the drug should be discontinued. Concomitant use of gold or phenylbutazone with Aralen should be avoided because of the tendency of these agents to produce drug dermatitis.

Clinical Comments:

Of fifty patients receiving Aralen therapy, "43 have become really well; that is, they have no stiffness, and any pain that occurs can reasonably be attributed to use of joints affected by secondary degenerative changes. They have no evidence of joint inflammation, but may have a raised erythrocyte sedimentation rate. They have little or no need for analgesics." *Freedman*[3]

"One hundred and twenty-five private patients have been carefully followed clinically and haematologically while receiving well over 200 patient-years of chloroquine [Aralen] therapy. The results are considered good in 70%, one-half of these cases being in remission. Improved work performance, sedimentation rate, and hemoglobin levels paralleled the major objective gain in this 70%. 90% of them remained on chloroquine [Aralen] therapy, half for more than two years. Classical peripheral rheumatoid arthritis, spondylitis, arthritis of juvenile onset, and rheumatoid disease with psoriasis, all appeared to respond about equally well.

"It is suggested that chloroquine comes closer to the ideal for long-term, safe, control of rheumatoid disease than any other agent now available." *Bagnall*[4]

"Out of the 36 rheumatoid arthritis cases we treated . . . favorable results were obtained in 32 cases. *Bruckner et al.*[5]

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1. Haydu, G.G.: Rheumatoid arthritis therapy: a rationale and the use of chloroquine diphosphate, *Am. J. M. Sc.* 225:71, Jan., 1953.
2. Rinehart, R.E.: Chloroquine therapy in rheumatoid arthritis, *Northwest Med.* 54:713, July, 1955.
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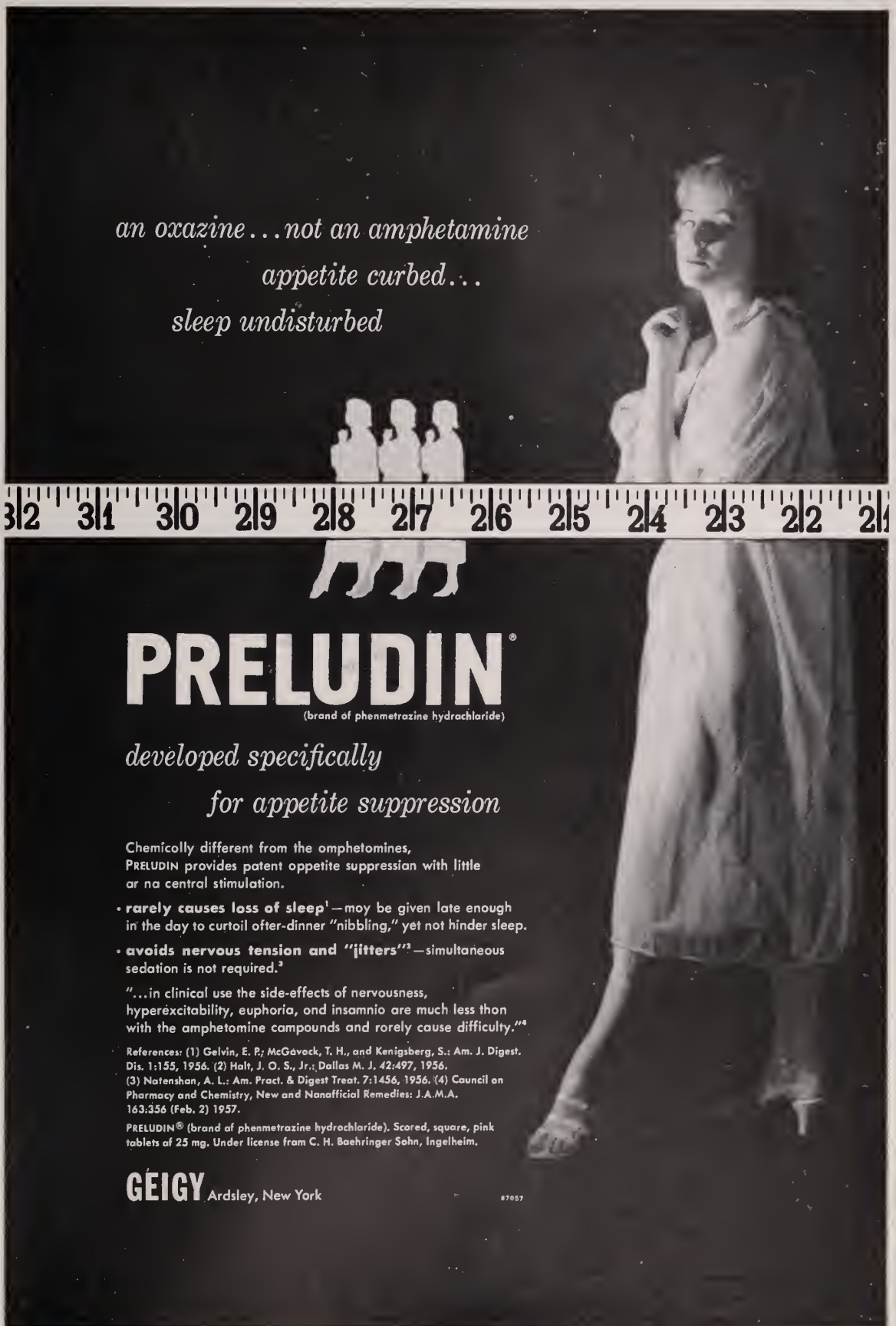
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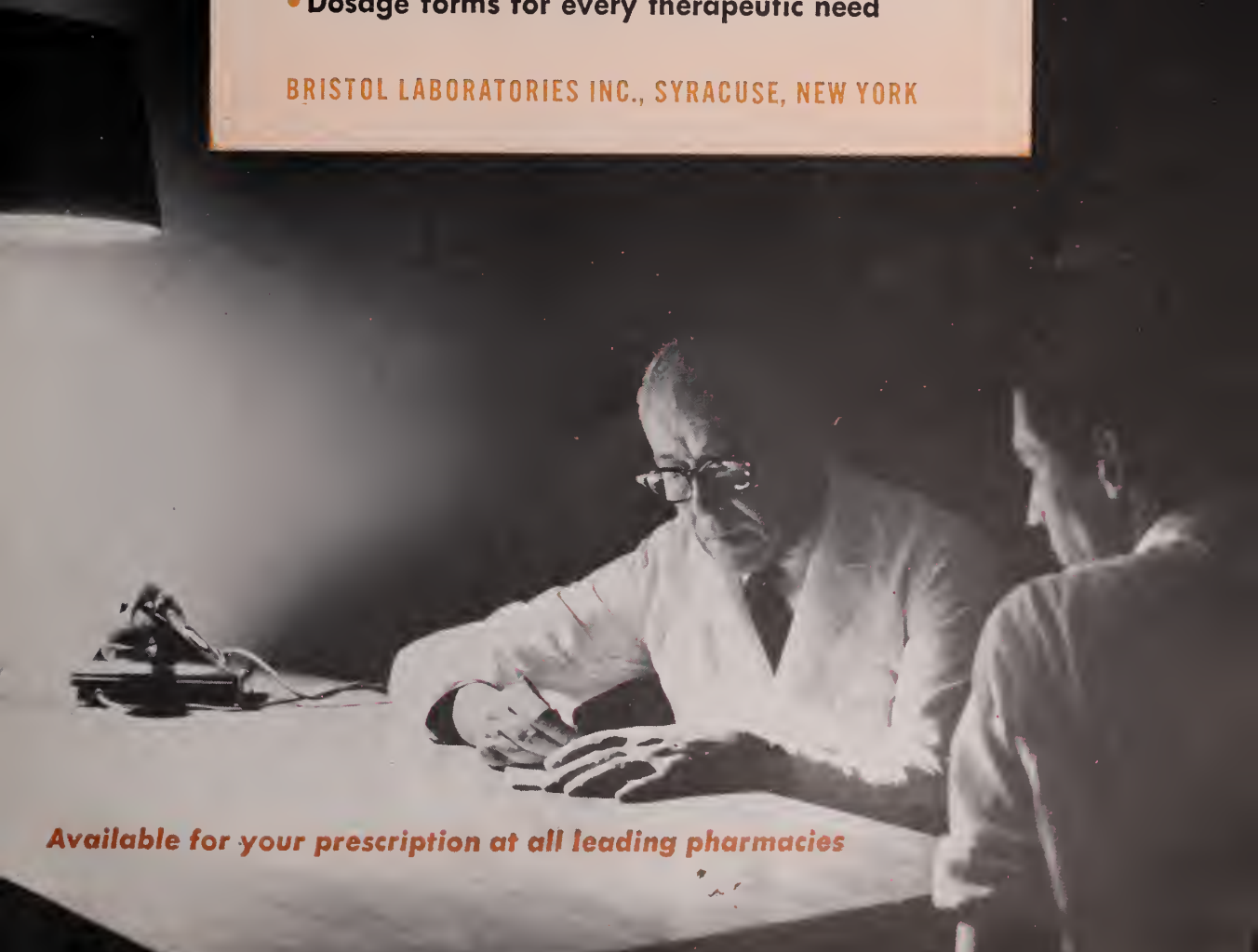
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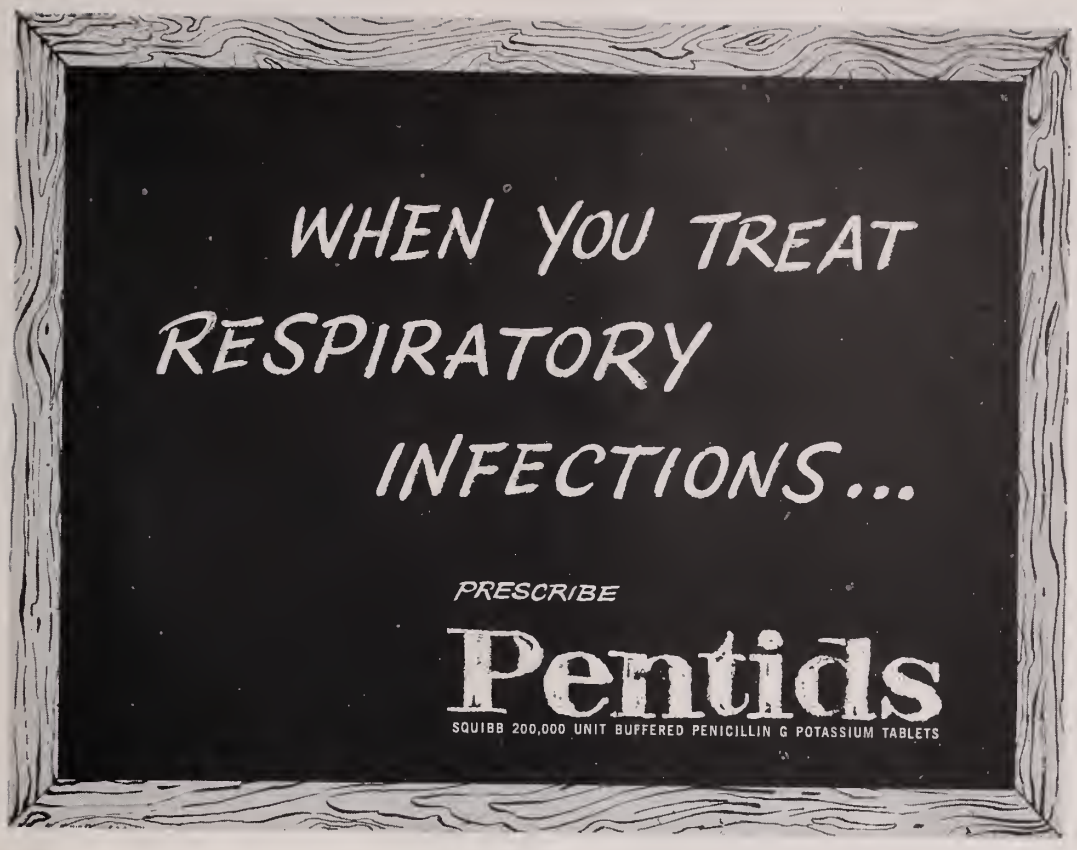
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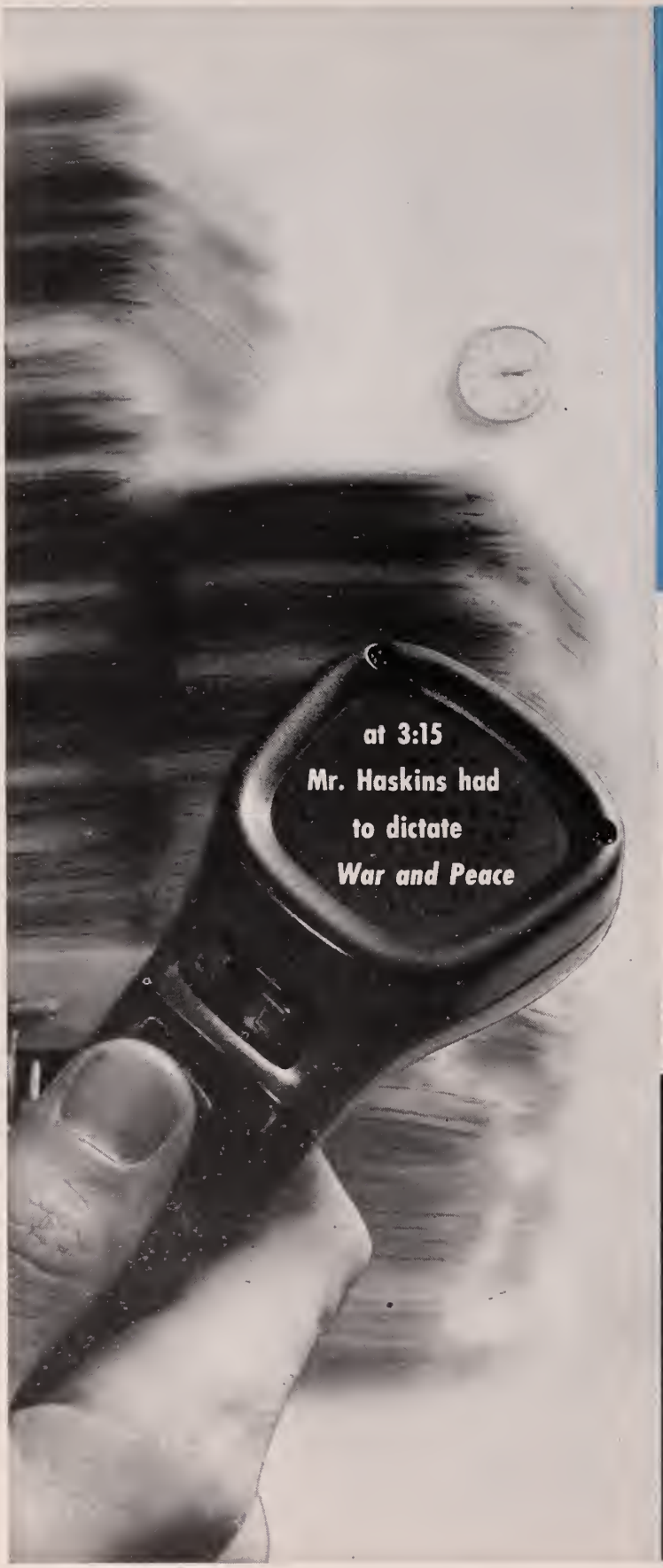
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